HYDRO-ELECTRIC INQUIRY COMMISSION

GENERAL REPORT

VOLUME I

W. D. GREGORY, CHAIRMAN
M. J. HANEY
LLOYD HARRIS
J. ALLAN ROSS
R. A. ROSS
COMMISSIONERS

JOSEPH H. W. BOWER
SECRETARY

(8)

Hydro-Electric Inquiry Commission 1922-24
General Report volume 1

March 5, 1924

(8)

INDEX TO VOLUME I

of the

GENERAL REPORT

of the

HYDRO-ELECTRIC INQUIRY COMMISSION

GENERAL REPORT

COPY

VOLUME I

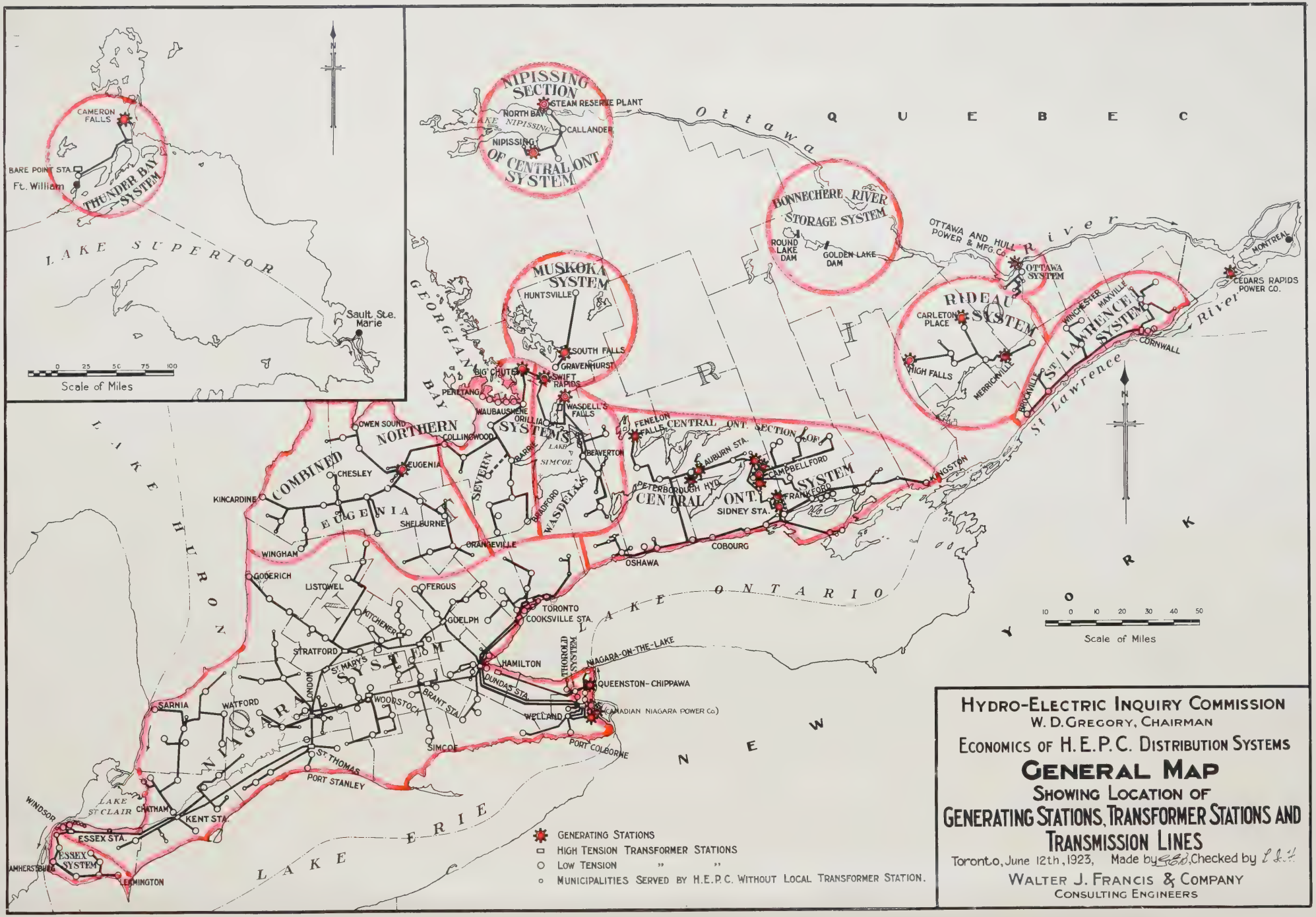
GENERAL REPORT

VOLUME I

INDEX TO VOLUME I
of the
GENERAL REPORT
of the
HYDRO-ELECTRIC INQUIRY COMMISSION

ITEM 10 VOLUME I
of the
ANNUAL REPORT
of the
HYDRO-ELECTRIC POWER COMMISSION

INDEX (Continued)


HYDRO-ELECTRIC INQUIRY COMMISSION
W. D. GREGORY, CHAIRMAN
ECONOMICS OF H. E. P. C. DISTRIBUTION SYSTEMS
GENERAL MAP
SHOWING LOCATION OF
GENERATING STATIONS, TRANSFORMER STATIONS AND TRANSMISSION LINES
Toronto, June 12th, 1923, Made by G.E.O. Checked by L.S.F.
WALTER J. FRANCIS & COMPANY
CONSULTING ENGINEERS
GENERATING STATIONS
HIGH TENSION TRANSFORMER STATIONS
LOW TENSION " "
MUNICIPALITIES SERVED BY H.E.P.C. WITHOUT LOCAL TRANSFORMER STATION.
Scale of Miles
NIPISSING SECTION OF CENTRAL ONT. SYSTEM
STEAM RESERVE PLANT
NORTH BAY
CALLANDER
LAKE NIPISSING
NIPISSING
BONNECHERE RIVER STORAGE SYSTEM
ROUND LAKE DAM
GOLDEN LAKE DAM
OTTAWA AND HULL POWER & MFG. CO.
OTTAWA SYSTEM
RIDEAU SYSTEM
CARLETON PLACE
HIGH FALLS
MERRICKVILLE
BROCKVILLE
MAXVILLE
WINCHESTER
ST. LAWRENCE SYSTEM
CORNWALL
CEDARS RAPIDS POWER CO.
MONTREAL
MUSKOKA SYSTEM
HUNTSVILLE
SOUTH FALLS
GRAVENHURST
BIG CHUTE
SWIFT RAPIDS
WASDELL'S FALLS
PERETANG
WAUBAUSHENE
ORILLIA
LAKE SIMCOE
BEAVERTON
BARRIE
SEVERN
BRADFORD
WASDELLS
NORTHERN SYSTEM
OWEN SOUND
COLLINGWOOD
COMBINED EUGENIA
CHESLEY
EUGENIA
KINCARDINE
SHELBURNE
WINGHAM
ORANGEVILLE
GODERICH
LISTOWEL
FERGUS
KITCHENER
GUELPH
STRATFORD
ST. MARYS
LONDON
NIAGARA SYSTEM
SARNIA
WATFORD
WOODSTOCK
BRANT STA.
SIMCOE
ST. THOMAS
PORT STANLEY
LAKE ST. CLAIR
CHATHAM
KENT STA.
WINDSOR
ESSEX STA.
ESSEX SYSTEM
AMHERSTBURG
LEAMINGTON
LAKE HURON
LAKE ERIE
TORONTO
COOKSVILLE STA.
HAMILTON
DUNDAS STA.
THOROLD SYSTEM
NIAGARA-ON-THE-LAKE
QUEENSTON-CHIPPAWA
(CANADIAN NIAGARA POWER Co.)
WELLAND
PORT COLBORNE
LAKE ONTARIO
CENTRAL ONT. SECTION OF
FENELON FALLS
AUBURN STA.
PETERBOROUGH HYD.
CENTRAL ONT. SYSTEM
CAMPBELLFORD
FRANKFORD
SIDNEY STA.
OSHAWA
COBOURG
KINGSTON
St. Lawrence River
Ottawa River
QUEBEC
NEW YORK
LAKE SUPERIOR
THUNDER BAY SYSTEM
CAMERON FALLS
BARE POINT STA.
Ft. William
Sault Ste. Marie
Scale of Miles

General Map

Showing Location of

Generating Stations, Transformer Stations and

Transmission Lines

of the

Hydro-Electric Power Commission of Ontario

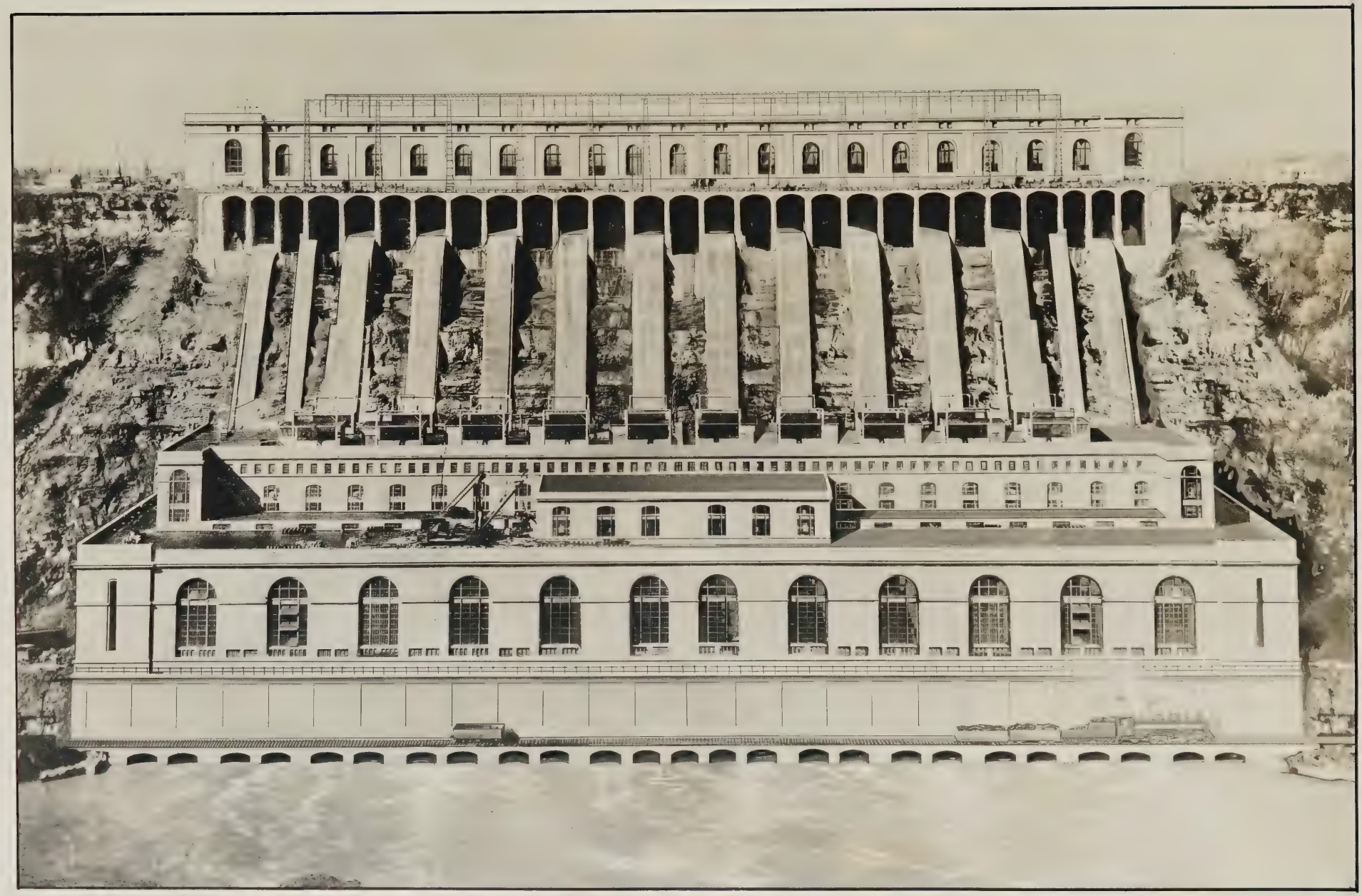
Photograph Showing

Power Plant

of the

Queenston-Chippawa Power Development

As it will appear if completed for ten units



To His Honour Henry Cockshutt,

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

By an order of Your Honour in Council dated the thirteenth day of April, 1922, and made in pursuance of "An Act respecting Inquiries concerning Public Matters", Revised Statutes of Ontario, 1914, Chapter 18, we were appointed as Commissioners to inquire into and report upon:

1. All estimates submitted from time to time to the Hydro-Electric Power Commission of Ontario for the Queenston-Chippawa Power Development, and also all estimates for the said work submitted by the said Commission to the Government of Ontario.

2. The reasons for increases from time to time in the estimates for the Queenston-Chippawa Power Development.

3. The total cost when completed of the Queenston-Chippawa Power Development.
   (a) With five units installed.
   (b) With units installed to the full capacity of the Canal.

4. The continuous output capacity of the Queenston-Chippawa Power Development, under the conditions mentioned in Clause 3.

5. The methods of construction, supervision and management which have been employed in the Queenston-Chippawa Power Development, and whether they can justifiably be continued for the economical completion of the work.

6. (a) The quantity of water now available for use by means of the Queenston-Chippawa Canal:
   (b) The power that can be developed thereby in continuous output at the Queenston Power Station.

To His Honour Harry Cockshutt,

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

By an order of Your Honour in Council dated the thirteenth day of April, 1922, and made in pursuance of "An Act respecting Hydro-Electric Public Works", Revised Statutes of Ontario, 1914, Chapter 16, we were appointed as Commissioners to inquire into and report upon:

1. All estimates submitted from time to time to the Hydro-Electric Power Commission of Ontario for the Niagara-Chippawa Power Development, and also all estimates for the said work submitted by the said Commission to the Government of Ontario.

2. The reasons for increases from time to time in the estimates for the Niagara-Chippawa Power Development.

3. The total cost when completed of the Niagara-Chippawa Power Development.

(a) With five units installed.
(b) With units installed to the full capacity of the Canal.

4. The continuous output capacity of the Niagara-Chippawa Power Development, under the conditions mentioned in Clause 3.

5. The methods of construction, supervision and management which have been employed in the Niagara-Chippawa Power Development, and whether they can justifiably be continued for the remaining completion of the work.

6. (a) The quantity of water now available for use by means of the Niagara-Chippawa Canal;
(b) The power that can be developed thereby in continuous output at the Queenston Power Station.

7. In what manner and to what extent will the price of Niagara Power be affected, if at all, by the cost of the Queenston-Chippawa Development.

8. Any other power developments undertaken by the Hydro-Electric Power Commission, and generally all matters of expenditure and administration by the said Commission.

To make such suggestions and recommendations in connection with or arising out of the subjects thus indicated, as may be desirable and to report the evidence and facts brought out by the investigation, along with such findings.

By a further Order-in-Council, dated the twelfth day of September, 1923, the immediately preceding paragraph of Your Honour's former Order was amended to read:

"To report the evidence and facts brought out by the investigation."

7. In what manner and to what extent will the price of Niagara Power be affected, if at all, by the work of the Mississaugas Development.

8. Any other power developments undertaken by the Hydro-Electric Power Commission, and generally all matters of expenditure and administration by the with Commission.

To make such suggestions and recommendations in connection with or arising out of the subjects thus indicated, as may be desirable and to report the evidence and facts brought out by the investigation, along with such findings.

By a further Order-in-Council, dated the twelfth day of September, 1922, the immediately preceding paragraph of Chief Commissioner's Order was amended to read:

"To report the evidence and facts brought out by the investigation."

PART I - INTRODUCTION

It was in the year 1906 that the Legislature acceded to the demand of a number of municipalities in western Ontario and passed an Act which, among other things, provided for the appointment of the Hydro-Electric Power Commission of Ontario (hereinafter called "the Commission"). The Province then entered upon a course which was bound to have a definite effect upon its economic structure. During the years that followed, the business administered by the Commission gradually increased. From a purchaser and distributor of electric power the Commission has now become an owner and builder of power plants of such size as to enable it to generate nearly all the power which it sells; it also operates on behalf of the Province the Central Ontario System; it has taken over control or operation of radial and street railways, and has promoted a scheme for building and operating a great system of radial railways which would have involved, had it been proceeded with, an expenditure of many millions. The plants owned and operated by the Commission now generate more electric power than any other group of publicly-owned electric power plants in the world. The total capital involved in the undertakings referred to amounted at October 31st, 1922, to about $170,000,000, of which approximately $160,000,000 has been advanced or guaranteed by the Province.

In and before 1922 there had been much criticism in the Legislature and elsewhere of the expenditures made for the construction of the

PART I. - HYDROELECTRIC

It was in the year 1903 that the Legislature created in the Commission of a number of municipalities in Ontario Ontario and passed an Act which, among other things, provided for the acquirement of the Niagara-Electric Power Commission of Ontario (hereinafter called "the Commission"). The Province then entered upon a course which was bound to have a definite effect upon its economic structure. Within the years that followed, the Province, administered by the Commission practically innovated. Upon a pioneer and distributor of electric power the Commission has now become an owner and builder of power plants of such size as it could in to generate nearly all the power which it could. It also undertook to assist of the Provinces the Central Ontario System; it has taken over material or operation of radial and street railways, and has promoted a scheme for building and operating a great system of radial railways which would have involved, had it been proceeded with, an expenditure of many millions. The plants owned and operated by the Commission now generate more electric power than any other group of municipally-owned electric power plants in the world. The total capital invested in the undertakings referred to amounted on October 31st, 1921, to about $170,000,000, of which approximately $15,000,000 has been advanced or guaranteed by the Province.

In and before 1920 there had been such activities in the Legislature and elsewhere of the expenditures made for the construction of the

various developments of the Commission, especially of the Queenston-Chippawa undertaking, and of the methods of operation and of the general conduct of the Commission's business. Your late Government appears to have been desirous of ascertaining not only whether what had been done had been properly done, but also to ascertain whether its confidence could be extended to the Commission in regard to future developments, the construction of which was already under consideration and for which the Province might at any time be requested to provide the funds. As the Government had to go on the market to secure present and future loans for the Commission, it was also important that the financial interests should have independent and authoritative information in respect of the organization for which the money was required. It thereupon decided to have an independent investigation made of all facts pertaining to the matters set forth in the commission issued to us.

Upon receiving notification of our appointment as Commissioners in this behalf, we proceeded, as expeditiously and thoroughly as the nature and extent of the inquiry warranted, to investigate and study the subject matters referred to us.

Briefly the investigation may be grouped under four headings: Engineering, Financial, Legal and General. The branches of our organization which were responsible to us therefor may be designated as the Engineering Department, the Financial Department, the Legal Department and the General Department. These several branches reported directly to us from time to time;

various developments of the undertaking, especially of the reservoir-dairy marketing, and of the methods of operation and of the general condition of the Commission's business. Then July, November appears to have been letters of encouraging not only whatever that had been done but been largely done, yet also to strength, making its satisfaction quite in extended to the Commission in regard to future developments, the conditions at which was already under consideration and by which the Province might at any time be required to provide the funds. In the Government had to go on the market in source present and future loans for the Commission, it was also important that the financial interests should have independence and authoritative information in regard to the expenditure for which the money was required. It therefore decided to make an independent investigation and, if all facts pertaining to the matters set forth in the memorials proved to be.

Upon receiving notification of our appointment as Commissioners in this behalf, we proceeded, in chronological and thoroughly as the nature and extent of the inquiry warranted, to investigate and study the matters referred to us.

Briefly the investigation may be grouped under four headings: Engineering, Financial, Legal and General. The members of our organization were responsible so to speak for the examination as the Engineering Department, the Financial Department, the Legal Department and the General Department. These several branches reported directly to us from time to time,

and after hearing evidence, studying the reports of the Departments mentioned and making our decisions, we prepared our reports to Your Honour. The reports, submitted to us by the General Department, served to a large extent, as drafts of our reports.

On beginning our inquiry we were impressed with the magnitude of the work before us, involving as it did an investigation of a capital investment of $170,000,000, and an annual expenditure of many millions of dollars and the investigation of all activities of the Commission in its relations with the Government and with the municipalities. This involved a review of the ability of the Commission in respect of business, engineering and construction, an investigation of the accounts, of their distribution, of their apportionment to different systems, together with the cost of power and the rates charged in various districts.

Our investigation was primarily directed to the most extensive undertaking of the Commission,- the Queenston-Chippawa Power Development, and into subject matters in relation thereto to which Your Honour's commission directed us particularly to inquire. At the time of our appointment as Commissioners, however, the power plant at Queenston had been in operation but a short time and the construction costs of the Development had not been brought up to date and distributed by the Commission. It was not until about six months later that the accounts and records of the Commission were in such shape that engineering and economic studies could be definitely undertaken. In the meantime, however, progress was being made in the investigation of other undertakings of the Commission.

and other working criterion, studying the reports of the Departments
mentioned and making our suggestions, we presented our reports to Sam Hammond.
The reports, submitted to us by the General Department, served to a large
extent, as drafts of our reports.

In beginning our inquiry we were interested with the magnitude
of the work before us, inasmuch as it did an investigation of a capital
investment of $172,000,000, and on account implications of many millions of
dollars and the investigation of all activities of the Commission in its
relations with the Government and with the municipalities. This involved a
review of the ability of the Commission in respect of business, engineering
and operation, an investigation of the accounts, of their distribution,
of their apportionment to different systems, together with the cost of power
and the rates charged in various districts.

Our investigation was primarily directed to the most expensive
undertaking of the Commission,- the Queenston-Chippawa Power Development, and
this engineer matters in relation thereto to which this Report's commission
directed us particularly to inquire. At the time of our appointment as
Commissioners, however, the power plant at Queenston had been in operation
but a short time and the construction work of the development had not been
brought up to date and satisfactorily by the Commission. It was not until
six months later that the accounts and records of the Commission were in such
shape that engineering and economic studies could be satisfactorily undertaken.
In the meantime, however, progress was being made in the investigation of
other undertakings of the Commission.

Your Honour having deemed the matter into which we were directed to inquire to be "connected with or affecting the good government of Ontario, or the conduct of any part of the public business thereof", we undertook the duties entrusted to us with the desire and determination of examining, studying and fully considering all matters of administration and expenditure by the Commission. It was necessary to adopt such a course in order that we might be able to submit to Your Honour a report showing the important consequences resulting from conformity with, or transgression of, the letter and spirit of statutory or other enactments under which this great public undertaking, initiated by an Act of the Legislature in 1906, has been administered.

In addition to these purely business and economic features there existed a vast body of criticism, suggestions for betterment, and so forth, coming from municipal bodies, from interested and sometimes hostile groups and from individuals more or less informed. In private business little weight would have been given to many of these criticisms, but in a public enterprise of such magnitude every suggestion and complaint had to be dealt with, and it was felt that due consideration should be given to such criticisms as were offered in order that the public might be informed as to the value of them.

Generally speaking, the degree of confidence that is placed in any organization which is administering a large undertaking is measured to a considerable extent by the efficiency that the organization has, in the past, displayed in the conduct of the affairs entrusted to it. With this principle in mind, therefore, we have endeavoured by means of a complete examination of

all of the business affairs of the Commission to lay before Your Honour a complete audit of the legal, financial and engineering features, so that the Legislature, as representing the Province in general, and the municipal corporations and others who have entered into contracts with the Commission, may know to what extent they have been justified in relying upon the methods and actions of the Commission in the administration of this great undertaking.

We trust, that, having investigated all of the activities of the Commission, which necessitated, amongst other things, the careful inspection and condensing of thousand of documents, and having examined its relations with the Province on one hand and the municipalities on the other, our reports will prove to be a useful source of information, not only to the Government but to the municipalities concerned and to individuals who are interested. In these reports will be found condensed the history of every large transaction of the Commission whether with the Government, the municipalities, or individuals, especially those transactions which have called for investigation or criticism, They summarize in a form in which it has never been presented to the public, the business of the Commission to date.

It is well known that effective and magnificent results have been attained by the Commission. It was for us to determine if what had been done had been done in a manner and at a cost which could be justified; if mistakes had been made and useless and extravagant expenditure had been incurred and if there had been breaches of trust and departure from the laws. If certain acts

of the Commission have been open to question, then the bringing of these acts to public attention may tend to prevent their repetition, may lead to an increase in the benefits accruing to the public and add to the credit due to the Commission for its general administration.

The nature and extent of the investigation undertaken by us was not of the character of an investigation that might be made of any ordinary business enterprise conducted for private profit. The measure of success in a private enterprise may be gauged with a fair degree of accuracy by the profits or losses shown on annual balance sheets. An individual or corporation, engaged in business conducted primarily for private gain, is not hedged in and restricted in his business activities to the same extent as is a trustee administering the affairs of others. The business of the Commission must be carried on in accordance with statutory or other competent authority under which it is created, and operates not for the profit of any individual, corporation, or class of the community, but for the general benefit of all. The basic principle of the Statutes governing the Commission is the supply of electrical power to municipal corporations at a price representing the actual cost thereof.

Generally speaking, these elements entering into the cost of power are the same for the Commission as for a private distributor of power, but, through the elimination of profit in the case of the operations of the Commission, the power consumers benefit by the amount of any dividends which might be paid to stockholders or of interest paid to bondholders in a private

of the Commission have been open to question, then the pledging of their acts to public criticism may tend to protect their activities, may lead to an increase in the overall activity of the public and add to the credit due to the Commission for its general administration.

The nature and extent of the investigation undertaken by us was not of the character of an investigation that might be made of any ordinary business enterprise conducted for private profit. The measure of success in a private enterprise may be gauged with a fair degree of accuracy by the profits or losses shown in annual balance sheets. An individual or corporation, engaged in business conducted primarily for private gain, is not hedged in and restricted in his business activities to the same extent as is a trustee administering the affairs of others. The business of the Commission may be carried on in association with electricity or other auxiliary public utilities in its province, and operates not for the profit of any individual, association, or class of the community, but for the general benefit of all. The basic principle of the statutes governing the Commission is the supply of electrical power to municipal corporations at a price representing the actual cost thereof.

Generally speaking, those elements entering into the cost of power are the same for the Commission as for a private distributor of power, but, through the elimination of profit in the case of the operations of the Commission, the power consumers benefit by the amount of any dividends which might be paid to shareholders or at interest paid to bondholders in a private

enterprise over and above the amount of interest now paid to the Government or others by the Commission. Thus, while there is no standard by which the efficiency of the Commission can be directly judged, we have endeavoured to determine whether or not the administration by the Commission of the business committed to its charge has been efficient, competent and economical, to ascertain whether or not consumers of electrical power and others dealing with the Commission are paying more than should be paid, and if injustice has been done to the Province or to any individual or corporation within the Province. Our inquiry, therefore, has been necessarily of a comprehensive and far-reaching character.

In the course of our investigation into the business and affairs of the Commission, we have had occasion and opportunity for tracing each and every step in the development of this great public enterprise and its steadily growing beneficial influence on the industrial and material progress of the Province. We have viewed many of the works of the Commission, have, in different parts of the Province, heard evidence from supporters and opponents of the enterprise, have considered many complaints against and criticisms of administrative and other acts of the Commission, have examined all available records and documents that were pertinent to our inquiry and have thus been enabled to arrive at definite conclusions of fact. Having regard to the complexities of the organization, its peculiar economic relations to the public and its magnitude, our analysis of the financial, engineering and legal aspects of each of the activities of the Commission covers a wide field.

In addition to investigating the finances of the Commission, we, with the consent of the Government, investigated in the Department of the Provincial Treasurer the accounts between the Government and the Commission to ascertain whether or not the Government was receiving from the Commission the cost of the moneys advanced to it. A full report thereon entitled "Cost of Money Advanced to the Hydro-Electric Power Commission by the Province of Ontario", was, in October last, presented by us to Your Honour.

Our reports have been submitted to Your Honour with the confident hope that full details of every feature of the Commission's administration have been exhibited and the Government and Legislature placed in a position to judge in what respects, if any, the methods and procedure of the Commission require revision, amendment or fuller definite legislative approval in order that the well-founded policy of public ownership and operation of the water power resources of the Province may merit and receive universal approval and support.

We now respectfully submit our General Report, which is necessarily in a large measure a résumé of salient facts and features relating to particular undertakings and activities upon which we have previously reported in detail. The business methods and principles generally employed and applied in the administration of all or several of the undertakings of the Commission, and divergencies therefrom in the case of particular works, together with other subject matters of public importance which have not been covered by our interim reports, are dealt with herein.

In addition to investigating the finances of the Commission, we, with the consent of the Government, intervening in the Department of the Treasury (however the country approves the Government and the Commission in accordance whether or not the Government was receiving from the Commission the part of the energy attached to it). A full report showing existing types of energy attached to the Commission from Commission by the provisions of Commission", was, in October last, presented to the Lord Chancellor.

Our reports have been submitted to Your Honour with the confident hope that full details of every Service of the Commission's administration have existing and the Government and Legislature passed in a position to judge in what respects, if any, the records and procedure of the Commission's existing provisions, management or future activity requirements required in order that the well-founded policy of public ownership and operation of the atomic energy resources of the province may work and remain satisfactorily equipped and supported.

We now respectfully submit our Annual Report, which is necessarily in a large measure a record of without fault and failures relating to particular enterprises and activities upon which we have previously reported in detail. The business methods and practices generally employed and applied in the administration of all or several of the undertakings of the Commission and disappropriate interference in the work of particular years, together with without matters of public importance which have not been covered by our interim reports, are dealt with herein.

PART II - SCOPE OF INQUIRY

Section I

GENERAL

The nature and extent of our inquiry has been indicated in the preceding introductory statements. The undertakings of the Commission in operation at the present time, which have been investigated and reported on by us, are as follows:

A. Power undertakings administered under the provisions of The Power Commission Act, being those supplying electrical power or energy to:

Thunder Bay System	Rideau System
Eugenia System	Bonnechere River Storage System
Muskoka System	Ottawa System
Severn System	Niagara System
Wasdell's System	Essex System
St. Lawrence System	Thorold System

B. Power undertakings constructed and operated under the provisions of The Ontario Niagara Development Acts:

The Queenston-Chippawa Power Development.

C. Power generating plants owned by incorporated companies, the control of which is vested in the Commission:

The Ontario Power Company of Niagara Falls
The Toronto Power Company, Limited, and its subsidiaries

D. Undertaking owned directly by the Province and operated by the Commission:

Central Ontario System.

PART II - LIST OF ITEMS

Section 1

A.E.E.E.A.

The Board has duties of our inquiry the best interests in the provincial hydro-electric structure. The relationship of the Commission in operations at the present time, which have been investigated and reported on by us, are as follows:

1. Power undertakings administered under the provisions of the Power Commission act, which take regulated electrical power or energy to:

Thunder Bay System	Sioux System
Algoma System	Temiskamingue Area Transmission System
Nipissing System	Ottawa System
Severn System	Niagara System
Madill's System	Essex System
St. Lawrence System	Thorold System

2. Power undertakings constructed and operated under the provisions of the Ontario Electric Development Act:

   The Queenston-Chippawa Power Development.

3. Power generating plants owned by municipal corporations, the control of which is vested in the Commission:

   The Ontario Power Company of Niagara Falls
   The Sherman Power Company, Limited, and its subsidiaries

4. Undertakings owned directly by the Province and operated by the Commission:

   Central Ontario System.

E. Hydro-Electric railways operated by the Commission under the provisions of The Hydro-Electric Railway Act, 1914, and special legislation:

Sandwich, Windsor and Amherstburg Railway and
Windsor and Tecumseh Electric Railway
Guelph Radial Railway
Hydro-Electric Radial Railways

+ - The Toronto Power Company, Limited, and its subsidiaries, while included in the above list of undertakings, were not investigated by us. It was acquired after our appointment and where it has been necessary to refer to it in our reports, we have used only general figures supplied to us by Mr. G. T. Clakrson, the Auditor.

Section 2

ADVISORY REPORTS

Detailed studies were made of the several undertakings of the Commission by our Engineering, Accounting, Legal and General Departments as before indicated.

Engineering Department

Under the direction and personal supervision of Mr. Walter J. Francis, C.E., M.E.I.C., our Consulting Engineer, exhaustive investigations and studies were made of the Queenston-Chippawa Power Development and other power systems of the Commission and reports dealing with the engineering economics thereof were submitted to and considered by us, and have been, or will be, transmitted to Your Honour. A list of these forms Appendix "A" to this report.

8. Ogden-Alberta railway created by the Legislature under the provisions of the Ogden-Alberta Railway Act, 1914, and special legislation;

Included, Valley and Lethbridge Valley and
Tilston and Dorman Alberta Railway
Leaside Edmonton Railway
Ogden-Alberta Valley Railways

- the Toronto Power Company, Limited, and its subsidiaries, while included in the above list of subsidiaries, were not investigated by us. It was decided after our appointment and this view is has been confirmed by later in our reports, we have made only general figures supplied to us by Mr. H. E. Dickenson, the auditor.

Section 2

ASSISTANCE GIVEN

Special assistance was made at the several subsidiaries of the Companies by our Engineering, Accounting, Legal and General Departments as below indicated.

Engineering Department

Under the direction and personal supervision of Mr. Walter C. Franklin, M.E., M.E.I.C., our Engineering Department, extensive investigations and studies were made of the Jasperson-Edmonton Power Development and other power systems of the Company and reports dealing with the engineering economic aspects were submitted to and considered by us, and have been, or will be, transmitted to your Commission. A list of these reports appears in this report.

Accounting Department

The books and accounts of the Commission being annually audited and reported upon by Mr. G. T. Clarkson, Auditor of the accounts of the Commission, a member of the firm of Clarkson, Gordon & Dilworth, and an Accountant of the highest standing and repute, it was deemed unnecessary to duplicate his work. It was considered essential, however, to employ accountants to make special examinations of the books and records of the Commission, to furnish complete reports of the financial transactions of each undertaking, to express opinion from an accountancy standpoint upon any transactions or methods that might appear open to criticism or unsound, and to ascertain from the books of account and records and to supply to our Engineering Department, data, statistics and information required by it.

Messrs. Price, Waterhouse & Co. were appointed by us as our Accountants. A list of the reports and memoranda submitted to us by them, which have been or will be transmitted to Your Honour, forms Appendix "B" to this report.

Legal Department

We did not organize a definite Department with a recognized head to deal with legal questions arising during the course of our inquiry, nor employ Counsel to appear at our public hearings, except those in connection with estimates and appropriations for the Queenston-Chippawa Power Development, for which Honourable N. W. Rowell, K.C., was engaged as Counsel and examined

Accounting Department

The books and accounts of the Commission being annually audited and reported upon by Mr. G. Stevens, auditor of the accounts of the Commission, a member of the firm of Stevens, Durkin & Sinnott, and an accountant of the Lighter-Stanley and Vaughn, it was deemed unnecessary to duplicate his work. It was constituted essential, however, to employ accountants to make special examinations of the books and records of the Commission, to furnish complete reports of the financial transactions of such examinations, to express opinion from an accountancy standpoint upon any transactions or methods that might appear from to criticism or comment, and to extract from the books of account such records and to supply to our Engineering Department, etc., statistics and information required by it.

Messrs. Price, Waterhouse & Co. were appointed by us as our accountants. A list of the reports and memoranda submitted to us by them, which have been or will be presented in their Report, these appendix "F" to this report.

Legal Department

We did not organize a Legal Department with a permanent head to deal with legal questions arising during the course of our inquiry, but employ Counsel to appear at our public hearings, except when in consultation with solicitors and departments for the Dominion-Ontario Inter-Jurisdictional, for which Counsel, H. E. Sewell, K.C., was employed to consult and assist

the witnesses testifying with a view to establishing all material facts relating to that subject matter, favourable or otherwise to the Commission.

Mr. F. W. Wegenast was employed during the early days of the inquiry as our Secretary, and part of the duties assigned to him was the making of preliminary investigations of a legal nature. When another Secretary was appointed, Mr. Wegenast's duties became of a strictly legal nature and these he continued to perform until early in the year 1923. Other members of the profession were from time to time engaged for the purpose of compiling data of a legal character, and giving assistance in the preparation of reports. Since February, 1923, Mr. J. A. McAndrew, K.C., has acted as our General Legal Adviser.

General Department

All secretarial work in connection with our inquiries and reports, the charge of all our official records, and the co-ordination of the work of the three aforementioned expert departments so that there might be no overlapping or unnecessary expense, was assigned to the General Department, which was under the direction of our Secretary, Mr. J. H. W. Bower, Civil Engineer. It was the duty of the General Department to study the reports of the Departments just mentioned and to prepare for us, from these reports and from other information in our hands, material for our reports. This material, as compiled, set forth in a concise manner the physical, economic, financial and legal aspects of the different subjects.

the witnesses testifying with a view to establishing all material facts relating to that subject matter, personally or attorney to the Commission.

Mr. J. T. Thornton was engaged during the early day of the inquiry as our Secretary, and part of the duties assigned to him was the making of preliminary investigations of a legal nature. When another Secretary was appointed, Mr. Thornton's duties became of a purely legal nature and ceased to be confined to portions until early in the year 1921. Other members of the profession were from time to time employed for the purpose of compiling data of a legal character, and giving assistance in the preparation of reports. Alan Mahoney, K.C., M. A. Sinclair, K.C., was retained as General Legal Advisor.

COPY

General Investigations

All substantial work in connection with our inquiries and reports, the design of all our official reports, and the co-ordination of the work of the three administrative engineer departments so that there might be no overlapping or contradictory reports, was assigned to the General Department, which was under the direction of our Secretary, Mr. J. A. T. Lowe, Civil Engineer. It was the duty of the General Department to study the reports of the Departments Engineers and to prepare draft reports, from these reports and from other information in our hands, material for our reports. This material, or analysis, set forth in a popular manner the physical, economic, financial and legal aspects of the different projects.

Section 3

OUR REPORTS

The reports heretofore submitted to Your Honour have been of two classes: namely, those dealing with the several distinct undertakings of the Commission and those bearing upon certain general matters investigated by us. The former of these have been designated as Reports upon Systems, using the term "Systems" as equivalent to works or undertakings serving systems or groups of municipalities, and in these are contained, with full details, a history of the undertaking, its engineering features, its financial aspects, and comments upon the inter-relationship of the Commission, the Province, Municipal Corporations and others. A list of these System Reports and of those dealing with certain general matters, all of which have been transmitted to Your Honour, is here given:

- Thunder Bay System
- Central Ontario System
- Sandwich, Windsor & Amherstburg Railway and Windsor and Tecumseh Electric Railway
- Guelph Radial Railway
- Eugenia System
- St. Lawrence System
- Severn System
- Ottawa System
- The Ontario Power Company of Niagara Falls
- Examination of Auditor's Reports
- Hydro-Electric Radial Railways
- Wasdell's System
- Cost of Money Advanced to the Hydro-Electric Power Commission by the Province of Ontario
- Rideau System
- Muskoka System
- Niagara System

Appendix I

[illegible]

The reports hereinafter enumerated in four Groups have been of two classes: namely, those dealing with the general (history and/or) [illegible] of the Conspiracy and those dealing upon specific general matters investigated by us. The fifteen of these have been enumerated as Reports upon Systems, using the term "System" as equivalent in sense to conducting moving systems or groups of municipalities, and in these are contained, with full details, a history of the undertaking, its engineering features, its financial aspects, and however upon the inter-relationship of the Municipalities, the Provincial, Municipal Governments and Commissions. A [illegible] upon Reports and of those dealing with certain general matters, all of which have been translated by Dom Luzzi, is here given:

Thunder Bay System
Central Ontario System
Lambton, Kinloss & Bruce Township Railway
and Thunder and Spanish Rivers Railway
Wright Radial Railway
Sagamie System
St. Lawrence System
Nevers System
Ottawa Public
The Ontario Power Company of Niagara Falls
Construction of Railway Bridges
Hydro-Electric Radial Railway
Crandall's System
Cost of Money Advanced to the Hydro-Electric
Power Commission by the Province of Ontario
Niagara System
Georgian System
Niagara System

History and General Relations
The Queenston-Chippawa Power Development
Volumes I, II, III and IV
Thorold and Essex Systems and Bonnechere River
Storage System

Review of Legislation - by J. A. McAndrew, K.C.,
and R. Leighton Foster

Section 4

PLAN OF GENERAL REPORT

This, our General Report, is intended to be a summing up and discussion of the broad general outstanding questions which have been dealt with in our former reports, to which we shall refer as occasion arises. The detailed information contained in our System Reports is not repeated, nor are the comments in our reports on general matters given in extenso. The subjects dealt with herein are indicated in the Index at the beginning of this report.

Electric and Manual Relations
The Queenston-Chippawa Power Development
Volumes I, II, III and IV
Electrical and Hydro System and Transmission Lines
Energy System

Review of Legislation - by J. A. Hardcastle, K.C.,
and A. Brigden Fraser

Section 4

Plan of General Report

This, our General Report, is intended to be a summing up and discussion of the broad general outstanding problems with any two dealt with in our three reports, to date, which may be classed as special studies. The details individually overlooked in our general reports in our reports, but are the concern in our reports on general matters given in volumes. The majority fully with matters included in the Index at the beginning of this report.

PART III - HISTORY AND LEGAL STATUS OF THE COMMISSION

Section 5

HISTORICAL

Our report entitled "History and General Relations" is a comprehensive record of the incidents connected with the promotion, creation and rapid growth of the Commission. Therein is traced the course of Legislative enactments increasing its powers, duties and responsibilities and in some respects altering the basic principles upon which its creation was founded. The salient points dealt with in our former report are here but briefly summarized.

Prior to 1902 the water power resources of the Province were to a certain extent in the control and possession of private individuals or corporations, but many of the water power privileges of the Province were undeveloped or but partly developed and remained the property of the Crown, as represented by the Province. In 1900, a movement was inaugurated for the utilization of these natural resources for the benefit of municipalities and meetings were held in Toronto, Waterloo and elsewhere. These are more fully dealt with in our report on the history of the movement. The leading spirits were Mr. E. W. B. Snider, member of the Legislature for North Waterloo, and Mr. D. B. Detweiler. A meeting of municipal representatives interested was held on February 17th, 1903, one of those present being Mr. Adam Beck, then Mayor of the City of London, who later became the most active and forceful advocate of the policy of public control of power supply. A delegation waited upon Honourable Mr. Ross

PART III - THEORY AND LEGAL ASPECTS OF THE REGULATION

Section 1

ESTATES

The report entitled "Energy and General Resources" is a comprehensive review of the industry concerned with the production, distribution and legal rights of the Dominion. Canada is blessed the source of agricultural resources including its power, mines and hydro-electric and is now renewing attention the basic principles upon which its economic may develop. The salient points dealt with in our report have not totally encountered.

Prior to 1918-19 the water power resources of the Province were in a certain status in the matter of the reservation of private individuals or corporations, but some of the water power privileges of the Province were reserved or not partly developed and remained the property of the Crown, as represented by the Province. In 1919, a measure was introduced for the utilization of these natural resources for the benefit of municipalities and municipal rate held in Toronto, Kingston and elsewhere. There are more fully dealt with in our report on the history of the movement. The leading spirits were Mr. H. H. Dadson, member of the Legislature for Essex Township, and Mr. A. A. Ratcliffe. A meeting of municipal representatives interested was held on February 11th, 1921, one of their present being Mr. John Dow, then Mayor of the City of London, who later became the most active and forceful advocate of the policy of public control of power supply. A delegation waited upon Premier Mr. Drew

and members of his Government and urged the appointment of a Government Commission to undertake the duty of supplying electrical power or energy to municipalities, or in the alternative, that municipalities be authorized to co-operate for this purpose. The Government declined to accept responsibility to the extent asked, but introduced a Bill, which was passed at the Session of 1903, entitled "An Act to provide for the Construction of Municipal Power Works and the Transmission, Distribution and Supply of Electrical and other Power and Energy", referred to in this report as the "Act of 1903". This Act enabled municipalities to acquire and construct works for the direct supply of electrical power or energy without intervention or assistance by the Government and subjects, as to acquisition of plants, to those provisions of the Municipal Act, commonly known as the "Commee Clauses" (1903,C.19,S.566, Cl.(a) to (a9)).

Under the authority of this Act, Commissioners were appointed by a group of western Ontario municipalities "to determine the feasibility and desirability of securing the establishment and operation of municipal power, heat and light works". In 1905,pending investigations by this Municipal Commission of which Mr. E. W. B. Snider was Chairman, and Mr. Adam Beck a member, a change of Government took place, Honourable Mr. Whitney replacing Honourable Mr. Ross as Premier of the Province. Mr. Adam Beck became a member, without portfolio, of the new Government, which shortly after assuming power appointed Commissioners, with Honourable Mr. Beck as Chairman, to inquire into and recommend such action as they might deem necessary or advisable for the purpose of providing municipalities with electrical power at cost.

and members of his Government and urged the appointment of a Government Commission to authorize the sale of supplying electrical power or energy to municipalities, or in the alternative, that municipalities be authorized to co-operate for this purpose. The Government declined to assume responsibility in the matter myself, but introduced a Bill, which was passed at the Session of 1922, entitled "An Act to provide for the Construction of Electrical Power Works and the Transmission, Distribution and Supply of Electrical and Other Power and Energy", referred to in this report as the "Act of 1922". This Act enabled municipalities to acquire and construct works for the direct supply of electrical power or energy without intervention by the Commission and subject, as to acquisition of plants, to those provisions of the Railway Act, commonly known as the "Green Clause" (1906, c.9, s.3, 7.(1) as lai).

Under the authority of this Act, Commissioners were appointed to a group of western Ontario municipalities "to determine the practicability and desirability of securing the construction and operation of municipal power, heat and light works". In 1923, similar investigations by this Municipal Commission of which Mr. J. S. Duff was Chairman, and Mr. Adam Beck a member, a change of Government took place, Hon. Mr. Sidney Fisher replacing Hon. Mr. Doherty as Minister of the Interior. Mr. Adam Beck became a member, without portfolio, of the new Government, which, shortly after assuming power appointed Commissioners, with Hon. Mr. Beck as Chairman, to inquire into and report upon such matters as they might deem necessary or advisable for the purpose of providing municipalities with electrical power or energy.

The reports of both the Municipal and Government Commissioners were presented in 1906, within a few days of one another. The estimates of cost in both reports were approximately the same.

The recommendations of the Commissions were generally adopted and the Legislature on the 7th May, 1906, passed an Act entitled "An Act to provide for the Transmission of Electrical Power to Municipalities", referred to in this report as the "Act of 1906". Under the provisions of this Act, the "Hydro-Electric Power Commission of Ontario" was appointed and consisted of Honourable Adam Beck, Chairman, Honourable John S. Hendrie and Mr. Cecil B. Smith, C.E. The Act of 1906 was revised in 1907, the short title of the revised Act being "The Power Commission Act".

Since the passage of the Act of 1906, the powers and duties of the Commission have been greatly extended, not only by amendments thereto, but by other Statutes. Many of the amendments to The Power Commission Act were occasioned by the necessity for the approval of actions of the Commission for which there had been no legislative authority when they were taken.

Following its appointment, the Commission actively proceeded to carry into effect the provisions of the Act. Contracts were made with several municipalities, now part of the Niagara System, for the purchase by them and sale to them by the Commission, of Niagara power, an agreement for the supplying of which had been made between the Commission and The Ontario Power Company of Niagara Falls. Distribution of this power began on the 11th November, 1910,

The reports of both the Municipal and Government Commissioners were presented in 1906, within a few days of one another. The estimates of cost in both reports were approximately the same.

The recommendations of the Commissions were promptly enacted into legislation in the 7th Sess., 1906, passed by the Ontario Legislature, providing for the transmission of electrical power to municipalities, referred to in this report as the "Act of 1906". Under the provisions of this Act, the "Hydro-Electric Power Commission of Ontario" was appointed and consisted of Honourable John Dryden, Chairman, Honourable John S. Hendrie and Mr. Geoff B. Smith, K.C. The Act of 1906 was revised in 1907, the short title of the revised Act being "The Power Commission Act".

Since the passage of the Act of 1906, the powers and duties of the Commission have been greatly enlarged, not only by amendments thereto, but by other Acts. Many of the amendments to the Power Commission Act were mentioned in the memorandum for the approval of which the Commission was authorized by the Lieutenant Governor in Council, and which they were taken.

Relative to expenditure, the Commission actually proceeded to carry into effect the provisions of the Act. Contracts were made with several municipalities, the power of the Niagara System, for the purchase by them and sale to them by the Commission, of Niagara power, an agreement for the supplying of which had been made between the Commission and the Toronto Power Company at Niagara Falls. Distribution of this power began on the 11th December, 1911,

over the first transmission lines constructed by the Commission. Since that date the volume of business transacted by the Commission has regularly and rapidly increased. Not only has there been a continuously increasing demand for power which has been supplied by new construction and extension of former construction in various sections of the Province, but the Commission has undertaken also the acquisition and operation of the power generating plants of The Ontario Power Company of Niagara Falls and The Toronto Power Company, and of electric railway companies. Many privately-owned power generating and distributing plants have been acquired by purchase or by expropriation, the Commission not being hampered by the provisions of the "Conmee Clauses", which the Act of 1906 declared not to be applicable to municipalities entering into contracts with the Commission. A list of these properties so acquired is given in our report, "History and General Relations"; the number is over ninety.

The acquisition by the Province in 1916 and operation by the Commission since that date on behalf of the Province of the power development and distributing system in Central Ontario, involving the operation of an electric railway in the City of Peterborough, a pulp mill at Campbellford, municipal gas plants and other utilities in the Central Ontario District, added greatly to the duties and responsibilities of the Commission. Great and important as are the works mentioned, they are in total surpassed by the work not yet completed in connection with the Queenston-Chippawa Development, authorised and carried on under the provisions of The Ontario Niagara

over the first transmission lines constructed by the Commission. Since that date the volume of business transacted by the Commission has regularly and rapidly increased. The only has there been a continuously increasing demand for power which has been supplied by new construction and extension of power installations in various municipalities at the province, but the Commission has undertaken also the acquisition and operation of the power generating plants of the Ontario Power Company of Niagara Falls and the Ontario Power Company, and of electric railway companies. Some privately-owned power generating and distributing plants have been acquired by purchase or by expropriation, the transaction has being supported by the provisions of the "Common Shares", which the law of 1924 contained but is no applicable to municipalities adopting the Agreement with the Commission. A list of those properties as acquired is given in our report, "History and General Relations", the number is now eighty.

The acquisitions by the Province in 1910 and operation by the Commission since that date on behalf of the Province of the power development and distributing system in Central Ontario, including the operation of an electric railway in the city of Peterborough, a gas mill at Campbellford, municipal gas plants and other utilities in the Central District, added greatly to the duties and responsibilities of the Commission. Great and important as are the works mentioned, they are in total insignificant by the scope and yet complicated in comparison with the Niagara-Niagara Development, undertaken and carried on under the provisions of the Ontario Electric

Development Act of 1917, a separate report upon which we have submitted to Your Honour.

The rapid expansion of the activities of the Commission is graphically shown by the corresponding increase in obligation assumed by the Province to meet the cost of works constructed or operated by the Commission and we insert as page 22 a diagram included in a former report to illustrate this increase.

Section 6

LEGAL STATUS

The powers and duties of the Commission have from time to time increased, as has been hereinbefore indicated. Their exercise has been regulated in certain cases by amendments to The Power Commission Act and in others by special Statutes. The constitution of the Commission with changing personnel has remained the same since the passage of the Act of 1906. It consists of three members appointed by the Lieutenant-Governor in Council. Every person appointed to the Commission holds office during pleasure, and the Lieutenant-Governor, upon death, resignation or removal from office of any member of the Commission may appoint some other person to fill his place. Two of the members may be and one must be a Member of the Executive Council. The Lieutenant-Governor in Council appoints one of the members to be Chairman of the Commission. The Commission is declared to be a body corporate and as such its corporate powers and duties must be exercised by at least a quorum of two members.

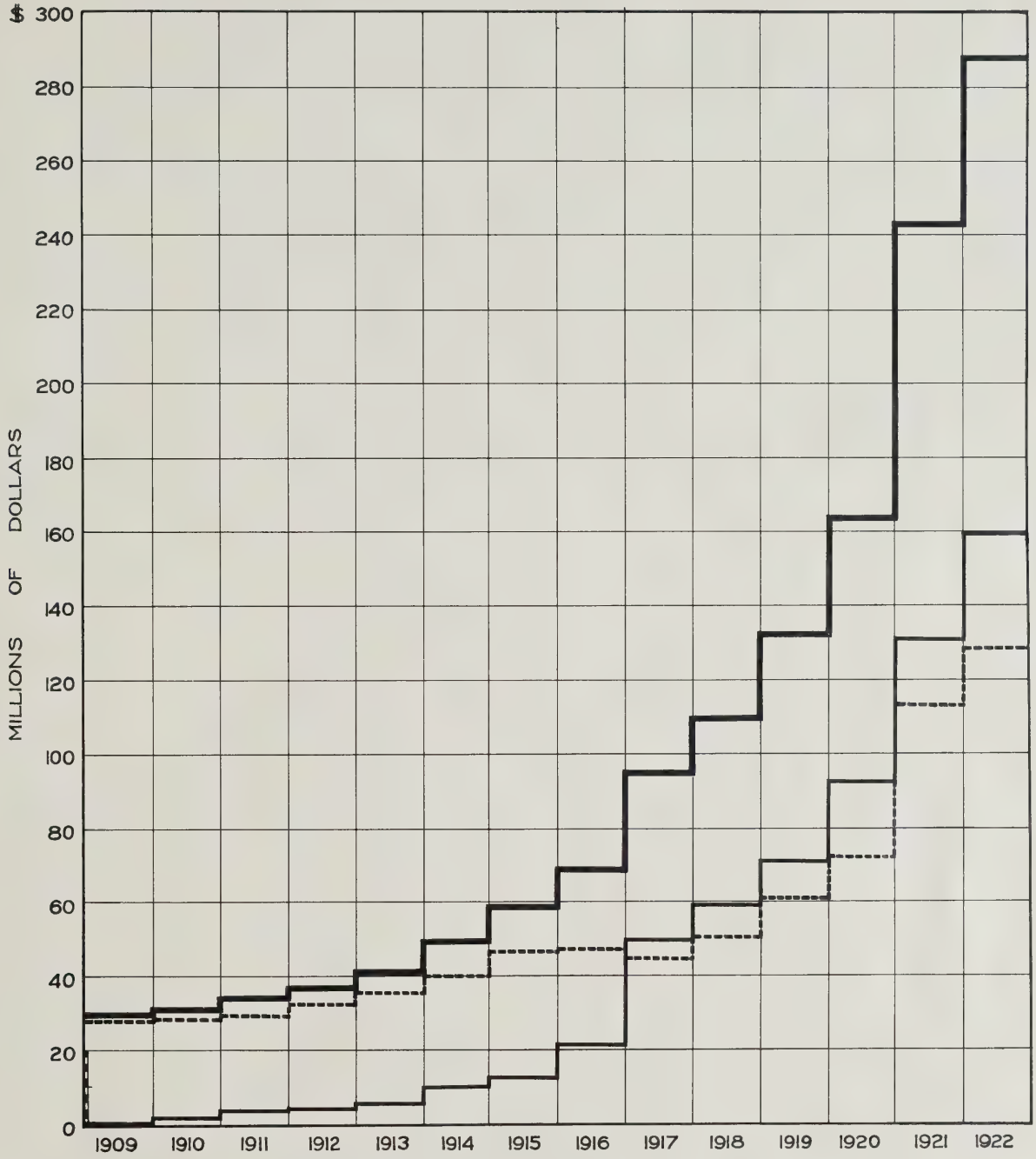
Jewishness Act of 1941, a separate Senate was made to have authority in Your Honour.

The rapid expansion of the activities of the Commission is probably owing to the increasingly harsher in activity showed by the Petitions to beat the most at cases constituted or created by the Commission and be found on page 22 a diagram included in a report showing in illustrated this increase.

Section 4

Abolition

The powers and functions of the Commission have from time to time increased, as has been particularly indicated. Their searches has been restricted in certain cases by amendments to the Jewish Commission Act and in others by special decrees. The constitution of the Commission with chairman presented has remained the same since the passing of the Act of 1941. It consists of three members appointed by the Hungarian-Jewish in Council. Every person appointed to the Commission must either serve gratuitously, and the Hungarian-Jewish, upon board, resignation or removal from office of any member of the Commission may appoint some other person to fill his place. Any of the members may be and are meant to a member of the Committee Council. The Hungarian-Jewish to Council appoint one of his members to be Chairman of the Commission. The Commission is declared to be a body corporate and to have its jurisdiction and duties that is assigned to it by a quorum of two members.



TOTAL PROVINCIAL LIABILITIES

TOTAL H.E.P.C. AND CENTRAL ONTARIO SYSTEM CASH ADVANCES AND OTHER LIABILITIES

PROVINCIAL LIABILITIES OTHER THAN H.E.P.C. AND CENTRAL ONTARIO SYSTEM

HYDRO-ELECTRIC INQUIRY COMMISSION

TOTAL PROVINCIAL LIABILITIES COMPARED WITH THOSE INCURRED BY THE PROVINCE ON ACCOUNT OF THE HYDRO-ELECTRIC POWER COMMISSION AND THE CENTRAL ONTARIO SYSTEM

September 11th., 1923

There is no provision in The Power Commission Act or other Statute authorising the delegation of any of the powers of the Commission to its officers or others. As a body corporate many of its acts and deeds must be evidenced by a corporate seal. In the absence of any provision authorizing the Commission to pass by-laws or other regulations governing the conduct of its business, it would appear that the affixing of the corporate seal should be under the hands of at least a quorum of the members. Any corporate powers of the Commission should be exercised by all its members or at a meeting for which notice has been given to all and at which at least two members are present.

Our attention has been drawn to the fact that the validity of transfers of land under The Land Titles Act executed by officers of the Commission has been questioned, there being no authority under the Statutes or otherwise for delegation of this power of the Commission to its officers. An amendment to the Act appears desirable to provide that any documents requiring the seal of the Commission may on its authority be executed by designated officers.

The Commission, subject to the approval of the Lieutenant-Governor in Council, may borrow money and issue bonds, debentures and other securities therefor. It also has power to issue securities in payment of the acquisition of certain properties. These securities have been signed, we understand, by the Chairman and the Secretary of the Commission, as have also other formal documents of the Commission. Many corporate acts of the Commission have not been formally approved at meetings of the Commission. The validity of the issue of the securities has not, we believe, been raised by purchasers or other holders of securities of the Commission. They probably rely upon the Provincial

There is no provision in the Income Commission Act or other statute authorizing the delegation of any of the powers of the Commission to its officers or others. In a body corporate composed of five men and hence must be exercised by a corporate seal. In the absence of any provision authorizing the Commission to grant by-laws or other regulations governing the conduct of its business, it would appear that the authority of the employees must should be under the hands of at least a quorum of the members. Any employee wishing to the Commission should be accompanied by all the necessary or at a meeting for which notice has been given to all and at which at least two members are present.

As stenographers not been known to the fact that the validity of transcripts of land under the land titles act examined by officers of the Commission also has been questioned. There seems to be authority under the statutes to appoint the examination of this power of the Commission to the officers. An amendment is the act appears desirable to provide that any stenographer employed by the Commission may on its authority be examined by examining officers.

The Commission, subject to the approval of the Lieutenant-Governor in Council, may acquire rents and issue bonds, debentures and other securities therefor. It also has power to issue securities in payment of the expropriation of certain properties. These securities have been signed, on behalf, by the Chairman and the Secretary of the Commission, as has also been formal documents of the Commission. Many expropriations of the Commission have not been formally approved at meetings of the Commission. The validity of the issue of the securities has not, we believe, been raised by purchasers or other holders of securities of the Commission. Only probably only upon the invalidity

guarantee thereof, which has generally been given with the securities. Created by and continued in existence at the pleasure of the Lieutenant-Governor in Council, under authority of the Legislature, to exercise and perform duties assigned to it from time to time by the Legislature; depending very largely upon Provincial advances and guarantees to meet capital expenditures, it is difficult to understand the contention that has been raised in certain quarters that the status of the Commission is one merely of trustee for municipal corporations, which have entered into contracts with it, and that its actions are to be regulated in accordance with their expressed wishes or at its own will with consideration alone of the interests of municipalities, and this free from all Government control or interference. The practical result of such contention, if carried into effect, would be a reversion to the principle of the Act of 1903 and abandonment of Government control, upon which The Power Commission Act was originally based. Statutory changes have to a certain extent loosened the control of the Government over the Commission, but such changes have not altered the constitutional status of the Commission, and its acts are those of an Agent of the Province.

Section 7

GENERAL RELATIONS

The relation the Commission bears to the Province, to municipal corporations with which it has entered into contracts and to others, has been dealt with comprehensively in our report entitled "History and General Relations" and to a certain extent in our system reports and in those entitled "Cost of

Commission however, which has generally been given with the restrictions, imposed by and contained in statutes of the Legislature of the Newfoundland Government in Council, under authority of the Legislature, to exercise and perform duties assigned to it from time to time by the Legislature, depending upon local and provincial circumstances in each municipal corporation. It is difficult to understand the contention that has been raised in certain quarters that the status of the Commission is one merely of trustee for municipal corporations, which have entered into contracts with it, and that its actions are to be regulated in conformity with their expressed wishes in its own will with consideration alone of the interests of municipalities, and this free from all Government control or influence. The position would be absurd, if carried into effect, would be a reversion to the principle of the Act of 1920 and Government of Government control, upon which the Power Commission was originally based. Statutory changes have to a certain extent lessened the control of the Government over the Commission, but such changes have not altered the constitutional status of the Commission, and its acts are those of an agent of the Province.

Conclusion

The relation the Commission bears to the province, is established comprehensively when it is one complex into constituent and is clearly, has been dealt with comprehensively in our reports, entitled "History and General Relations" and to a certain extent in our previous reports and in those entitled "Cost of

Money Advanced to the Hydro-Electric Power Commission by the Province of Ontario" and "Examination of Auditor's Reports for Period 1916-1921 inclusive". We have not dealt in detail, nor do we deem it advisable or necessary now to do so, with the several transactions between the Commission and private individuals and corporations, involving amongst others the acquisition of some ninety undertakings connected with the generation and distribution of power. The general features of the relationship of the Commission to the Province and to contracting municipal corporations are here indicated. For fuller information on these subjects we refer Your Honour to the reports just mentioned.

Relations with the Province

The intention of the promoters of the Act of 1906 and of the Legislature in passing that Act cannot be doubted in view of the course of events related in a preceding section of this report. The change of public policy which took place when the Act of 1906 replaced that of 1903 and the casting primarily upon the Province the duty and responsibility of financing projects for the supply of electrical power or energy to such municipalities as might desire the same, and the public utterances upon the debate upon the Bill in the House in 1906, clearly show that the creation of the Commission was intended to be a means of enabling the Province to utilize, to as full extent as possible, its water resources for the supply of electrical power to the public at cost and, at the same time, to assure to the Province as a whole the full benefit of ownership of great natural resources. Initiated by representatives of municipalities, composing but a portion of the Province, difficulties in the way of municipal ownership or control and of financing the cost of generating

Many documents in the Hydro-Electric Power Commission, the Province of Ontario and Municipalities of Ontario's archives for Years 1910-1920 indicate, to some but small in detail, nor do we deem it advisable or necessary now to go on, with the several transactions between the municipalities and private companies, involving amongst others the acquisition of some ninety municipalities associated with the Commission in 1920. The financial structure of the relationship of the Commission to the Province and to municipal municipal corporations are also illustrated. For fuller information on this subject we refer that reader to the reports just mentioned.

Relationship with the Province

The legislative provisions of the act of 1906 and of the legislature in passing that act seems to doubted in view of the course of events related in a preceding section of this report. The change of public policy which took place when the act of 1908 implied that it was the settled policy of the Province to be duty and responsibility of Commission pertinent for the supply of electrical power or energy to some municipalities as might desire the same, but the public authorities upon the other hand, the Commission in the house in 1910, clearly show that the creation of the Commission was intended to be a means of enabling the Province to utilize, be as full extent as possible, its water resources for the supply of electrical power to the public at cost and, at the same time, to assist in the development of a source the full benefit of ownership of great natural resources. Initiated by representatives of municipalities, supplying the a portion of the Province, including in the map of municipal ownership or control and of financing the cost of generating

plants and main transmission lines, and the feeling that the undertaking was for the general good of the Province doubtless led to the adoption of the policy of Provincial control through a Commission appointed by and representative of the Government of the Province. The Commission was intended, as stated in 1906 by Honourable Mr. Whitney, to be in effect a Department of the Government.

Under The Power Commission Act of 1906, the Province provided all moneys to be expended by the Commission and the Commission was required to account to the Province for these moneys and also to pay over to the Province all sums received by it in the course of its business.

Amendments to the Act and the passage of other Statutes extending the powers of the Commission and relieving it of certain duties in respect of the disposition of moneys received by it from other than Provincial sources, have in a large measure altered the original relationship of the Commission to the Province, but not to the extent of completely removing it from Provincial control or placing it otherwise than in the position it originally occupied of a representative of the Province, created by the Legislature, and charged as a body corporate with the duty of exercising only such powers as the Legislature might confer on it. Frequent disregard of the limitation of those powers and of duties imposed upon it, appears to have led to the assumption by the Commission that it is a law unto itself, is not responsible to anyone for any of its actions and may conduct its business howsoever it pleases under the assurance that if any breach of trust be committed by it in regard to funds entrusted to it, or if any unauthorized course of action be adopted by it, or if an

ployer and main transportation lines, and the feeling that the undertaking was for the general good of the Province dwindled as the abortion of the policy of provincial control through a Commission appointed by and representative of the Government of the Province. The Commission was dissolved, as stated in 1924 by Premier Sir. Richard, it is after a Department of the Government.

Under the Labour Commission act of 1924, the Province provided all money to be expended by the Commission and the Commission was required to report to the Province for their money and also to put down in the Province all work done related by it in the course of its business.

Compared to the act and the powers of other States enabling the power of the Commission, the Commission is of minute detail in respect of the difficulties of energy required by it from other industrial courts. Here is a large measure altered the original relationship of the Commission to the Province, but not to the extent of completely removing it from industrial control of Labour is attractive than in the public it originally assigned by a representative of the Province, appoint the Commissioners, but assigned as a duty responsible also the duty of supervising duty which placed on the Commission right study on it. Proposed discussion of the Commission of these powers and of duties imposed upon it, appears to have had it the sympathies by the Commission that it is a law unto itself, is duty responsible to report the duty of its activity and duty should the Province consider it phase under the commission that if any should of there be modified by it is report to Minister of it, or if any recommendation arises of duties be modified by it, or if an

Auditor of its accounts or other person raises protest or objection , the Legislature will ratify, approve and ex post facto authorize its unauthorized acts.

The Statutes do not provide the machinery for direct control by the Government whereby unauthorized courses of action and unauthorized expenditures by the Commission may be prevented. Such a control was possible under the provisions for the appointment of a Comptroller enacted by the Legislature in 1916, but these provisions were, in effect, abrogated by subsequent amendments. Under the law as it now is, expenditures have been made at times without appropriations therefor and without the knowledge of the Legislature or of the Government. Appropriations have also been requested by the Commission for certain purposes and the Government has been assured that the expenditures would not exceed the amount required, although at the very time the appropriations were asked for the Commission knew or should have known that the expenditures had been or would be far in excess of the appropriations. Yet while the Government has no direct control over the acts of the Commission, it has a most effective indirect control for, as the Commission is appointed by, and removable by, the Government, it can, at any time, in the case of misconduct on the part of the Commission or any of its members, remove them from office. If knowing of wrongdoing it fails to exercise this remedy it becomes to a large extent responsible for the Commission's acts.

While the status of the Commission as a creation of the Province, with its members holding office at the pleasure of the Government and entrusted with the expenditure of large sums of public money and thus an Agent of the Province, has not been altered by Legislative amendments, sufficient changes

Dec 2600 P21 P38

have been made in the course of dealing between the Commission and the Government to give some ground for the attitude assumed in certain quarters that the Commission is a trustee solely for Hydro-municipalities and that the Province must make such monetary advances as are requested by the Commission and occupy the position of a mere creditor of the Commission for advances made and obligations assumed.

The general position which appears to have been taken by the Commission, and many of its supporters, is that the Treasury of the Province should be placed at the disposal of the Commission, and that the Government should without question provide for the Commission such funds as it may from time to time require, to be administered as to it may seem fit, for those municipalities of the Province, which have entered or may hereafter enter into contracts with the Commission for a supply of power. If this view were accepted by the Government and the Legislature, the credit of the Province would be placed largely in the Commission's hands. The attitude of the Commission does not tend towards allaying the suspicions or removing the objections of those portions of the Province which so far have been unable or unwilling to share in any benefits of public ownership and operation of a great public utility, for the financing of which they, as part of the Province, are responsible, nor is it such as to permit of harmonious relations between the Government and the Commission.

Other aspects of the relationship of the Commission to the Province, particularly with reference to the ownership of works and properties vested in the Commission are discussed later in this report.

Relations with Hydro Municipalities

This subject is fully dealt with in our report entitled "History and General Relations" and is specifically referred to in our various system reports.

As has been indicated in these reports, the belief has been engendered in the popular mind that the ownership of all works and properties vested in the Commission and constructed or acquired by means of Provincial advances or guarantees are held by the Commission solely as trustee for the respective municipal corporations which have entered into contracts with it, and for whose benefit the works and properties have been constructed or acquired. If this be the intention of the Legislature as expressed in its Statutory enactments, it would seem likely that some clearly expressed provision would be found in those enactments which would effectively relieve the Province from all further financial obligations and at the same time definitely fix responsibility for the repayment of Provincial advances and the assumption of Provincial obligations by municipalities in a definite manner and at definite times.

At a meeting of the Ontario Municipal Electric Association held in Hamilton on April 4th, 1923, the following resolution was adopted:

> "That this meeting of representatives of the Municipalities of the Niagara System engaged in the development, transmission and distribution of electric energy as a Municipal undertaking desire to place ourselves on record as believing the time has come to take such steps as will relieve the Provincial Government from all financial responsibility and place the administration and control of the Hydro-Electric System in the hands of the Municipalities who are owners and are financially responsible for the undertaking."

Relations with Other Municipalities

This subject is fully dealt with in my report entitled "Strategy and General Development" and is specifically referred to in my various special reports.

As has been indicated in those reports, the belief has been expressed to the Joint that that the economic of all works and undertakings carried in the Municipality and undertaken or subsidized by means of Provincial subsidies or guarantees and held by the Commission should be borne by the respective municipal corporations which have endorsed this undertaking and for which benefit the works and properties have been constructed or acquired. If this be the intention of the Legislature as expressed in its statutory enactments, it would seem clearly that some equitable arrangement provision must be found in these enactments which would effectively relieve the Joint from all further financial obligations and at the same time initially fix responsibility for the repayment of Provincial advances and the assumption of Provincial obligations by municipalities in a definite manner and at definite times.

At a meeting of the Ontario Municipal Electric Association held in Hamilton on April 4th, 1947, the following resolution was adopted:

> "That this meeting of representatives of the Municipalities of the Niagara System engaged in the development, transmission and distribution of electric energy as a Provincial undertaking desire to place themselves on record as believing the time has come to take such steps as will relieve the Municipal Governments from all financial responsibility and place the administration and control of the Hydro-Electric System in the hands of the Municipalities who are owners and are financially responsible for the maintenance."

The resolution is a direct reversion to the policy of the Act of 1903, and a rejection of the principles enunciated by the promoters of the Act of 1906 and expressed in that Act. It was made clear to us, however, by representatives of municipalities throughout the Province, who appeared before us, that the opinion expressed in the resolution above quoted is not the general opinion held by Hydro Municipalities throught Ontario.

The statement that the municipalities are the owners of the undertaking, presumably every part and parcel of works and properties vested in the Commission, is misleading and inaccurate. Under Section 22 of The Power Commission Act:

> "The expenditure of the Commission upon any works undertaken under the provisions of this Act for the benefit of any municipality or municipalities which have entered into contracts with the Commission shall be repayable to the Commission by such municipality or municipalities."

Under Section 23 of the Act only, is there any provision made for repayment by municipalities to the Commission of the latter's expenditures upon works undertaken for their benefit and then only by annual payments constituting a part of the "cost of power" for the year as apportioned and adjusted by the Commission. There is no direct responsibility cast by The Power Commission Act upon municipalities to repay the Province the amount of its advances or to relieve it from other obligations assumed even in connection with the works undertaken under the provisions of the Act for their benefit, much less for advances to the Commission for other purposes. The Commission as Agent of the Province has received advances and guarantees totalling over $150,000,000, and has expended this amount upon works and undertakings. (This amount does not

The resolution is a direct reversion to the policy of the Act of 1914, and a rejection of the principles enunciated by the promoters of the Act of 1921 and expressed in that Act. It was made clear to us, however, by representatives of municipalities throughout the province, who expressed fears to us, that the policies proposed in the resolution have gained in not the general opinion held by Hydro Municipalities throughout Ontario.

The evidence that the municipalities are the owners of the commission, presumably every part and parcel of works and properties vested in the Commission, is satisfying and convincing. Those details is of the Power Commission Act:

"The expenditure of the Commission shall be carried out in such manner as the provisions of this Act, or the benefit of any municipality or municipalities which have entered into contracts with the Commission shall be expended in the manner by such municipality or municipalities."

Under section 15 of the Act only, is there any provision made for expenditure by municipalities in the Commission of one letter's expenditures upon works constructed for their benefit and then only by annual payments constituting a part of the "cost of power" for the year as apportioned and adjusted by the Commission. There is no direct responsibility cast by the Power Commission Act upon municipalities to repay the Province the amount of its outlays on its works. It gives other municipalities assume even in connection with the works undertaken under the jurisdiction of the act for their benefit, much less for expenses of the Commission for other purposes. The commission on behalf of the Province has received revenue and guarantees totalling over $181,000,000, and has expended this amount upon works and administration. This amount does not

include expenditures on the Central Ontario System or certain bond issues not guaranteed by the Province.) Surely these works and undertakings must be deemed to be held by the Commission as Agent of the Province and the Province to be the beneficial owner thereof. The declaration in agreements between the Commission and municipal corporations, that the works constructed or acquired by the Commission to enable it to supply the power it undertakes to furnish to the municipal corporations are held by the Commission as trustee for them, means no more than that the ownership of these works will pass from the Province to them upon payment to the Commission of such annual amounts, invested in Provincial securities, as will at the expiration of a definite period form a fund sufficient to repay Provincial advances.

Up to the present time the total of these payments from the municipalities is sufficient to repay not more than two per cent. of the advances of the Province, and to this extent only are municipal corporations in any sense beneficial owners of the works and properties vested in the Commission at this time. Extensions and improvements are continuously being made to these works and properties, further advances being obtained from the Province for the purpose. Consequently, the proportionate interest of the municipalities in ownership is not materially increasing. Thus it will be seen that it will certainly be a very long period before complete ownership passes to them and in fact so long as expenditures are made it will never pass wholly to them. The impracticability of the municipalities taking "such steps as will relieve the Provincial Government from all financial responsibility and place the administration and control of the Hydro-Electric System in the hands of the municipalities

who are owners and are financially responsible for the undertaking" is evident.

The relation of the Commission to municipalities under The Power Commission Act, varied in some respects by the provisions of other Statutes which are hereinafter noted, involved the supply to them upon their initiative by the Commission of electrical power or energy "at cost". The elements entering into "cost" are determined by the Act and the apportionment and adjustment of this cost is made by the Commission. One of the elements of cost is the annual payment of a sum sufficient to form in a fixed period a sinking fund equal to the amount of the advances of the Province to meet the cost of works, and the cost of works depends entirely upon the judgment and economy exercised by the Commission in matters of administration and construction.

Under a subsequent heading the effect of preliminary estimates of cost or lack of such estimates upon the relationship between the Commission and municipalities, and cases in which dissatisfaction has been expressed, are dealt with.

PART IV - GENERAL FINANCIAL CONDITIONS

Section 8

METHODS OF KEEPING ACCOUNTS

The reports of our Accountants, Messrs. Price, Waterhouse & Co., entitled "Report upon General Accounting System" and "Detailed Memoranda re General Accounting System", which are transmitted to Your Honour herewith, exhibit the results of a detailed study of the accounting methods of the Commission. Their views are summarized in a statement, which we here quote:

"We feel that we have made a sufficiently thorough survey of the methods of Accounting to say that in our opinion the system is adequate, and efficient, both in respect to the manner in which the duties are apportioned to the various sub-departments, and as regards the records kept. There are one or two points, however, upon which we desire to comment.

1.- The only employees at the Head Office who are under bond are the paymaster and his assistant, who are covered in the amount of $5,000 each. Numerous employees attached to the Field Offices are bonded in individual amounts varying from $100.00 to $150,000.00. We think it would be in accordance with prudent business practice to have bonds taken out to cover other employees and officers having to do more or less directly with the receiving or disbursing of funds.

2.- We think that a book should be prepared and distributed among the employees of the Accounting and Engineering departments describing in detail the purpose of each account appearing in the card of accounts, and stating specifically the particular items or classes of items which should be charged or credited thereto. We are informed that the issuance of such a book has been considered but has been left in abeyance."

PART IV - FINANCIAL CONDITIONS

Section 2

REPORTS ON FIELD OFFICES

The reports of our "consultants", Messrs. Price, Waterhouse & Co., entitled "Report upon Financial Accounting System" and "Detailed Investigation of Financial Accounting System", which are transmitted to this Commission herewith, results the results of a detailed study of the accounting methods of the Commission. Their views are summarized in a statement, which we have quoted:

> "We feel that we have made a sufficiently thorough survey of the methods of accounting to say that in our opinion the system in existence, and efficient, both in respect to the nature in which the duties are apportioned to the various sub-departments, and in regards the records kept. There is no one or two points, however, upon which we desire to comment.
>
> 1.- The only employees at the Head Office who are under bond are the paymaster and his assistant, who are covered in the amount of $2,500 each. Numerous employees although in the Field Offices are bonded in individual amounts varying from $100.00 to $250,000.00. We think it would be in accordance with prudent business practice to have these bonds or some other employees and officers having to do more or less directly with the receiving or disbursing of funds.
>
> 2.- We think that a book should be prepared and distributed among the employees of the accounting and departmental departments describing in detail the duties of each account depending in the keep of accounts, and giving specifically the particular items or classes of items which should be charged or credited thereto. We are informed that the language of such a book has been prepared but has been left in abeyance."

"In conclusion we wish to state that we have not made any specific investigation of the details of the accounting methods followed in the cases of the -

Ontario Power Company of Niagara Falls
Ontario Transmission Company, Limited
Central Ontario System, or
Electric Railways.

"However, our general investigation of the accounts of those companies and systems has acquainted us with the bases on which the records are kept and having regard thereto and to the results of our enquiry into the detailed records being maintained at Toronto and at Niagara in connection with the Queenston-Chippawa Power Development, we are of the opinion that any further investigation of the accounting systems is unnecessary."

The system of keeping accounts relating to the construction work on the Queenston-Chippawa Development was the subject of additional studies and a further report by our Accountants, and for detailed information thereon reference may be made to their report entitled "Report upon Accounting Systems and Methods Employed at Niagara, in connection with Queenston-Chippawa Power Development".

We find that the methods and system adopted by the Commission in keeping its accounts are adequate and proper and draw attention to the recommendation of our Accountants, in which we concur, in respect of the bonding of employees having the custody and expenditure of public moneys and the issuance to them of a book containing detailed standard instructions.

The expenditure for legal expenses was a subject matter of inquiry, in regard to which certain information requested by us from the Commission

In conclusion we wish to state that we have not made any specific investigation of the adequacy of the grounding methods followed in the cause of the -

Ontario Power Company of Niagara Falls
Ontario Transmission Company, Limited
Central Ontario System, or
Ontario Railways.

However, our general investigation of the operation of these companies and systems has acquainted us with the bases on which the records are kept and having regard thereto and to the results of our enquiry into the detailed records being maintained at Toronto and at Niagara in connection with the Transmission-Company Power development, we are of the opinion that any further investigation of the grounding systems is unnecessary.

The system of grounding assumes relating to the construction work on the Transmission-Company development was adequate and a further report is not necessary, and the detailed information therein referred may be made in their report entitled "Report upon Grounding Systems and Details Employed at Niagara", in connection with Transmission-Company Power development.

We find that the methods and system adopted by the Commission in keeping its expenditure for adequate and proper and direct attention to the recommendations of the Accountants, in order to report, in regard to the keeping of equipment during the construction and commencement of public accounts and the issuance in time of a book containing detailed standard instructions.

The attendance for legal expenses was a matter of importance, in regard to which certain information requested by us from the Commission

has been withheld. A Legal Department of the Commission has, we understand, been recently established and better control and adjustment of legal expenses is now probably assured than under the loose system formerly prevailing, under which large amounts were paid for legal services to certain practitioners. During the period from October 31st, 1915, to October 31st, 1922, legal fees paid amounted to approximately $151,000. This amount includes payments made to three individuals of over $30,000 each, and a payment to one firm of over $23,000. With the exception of another payment of $8,000, the remaining amounts are relatively small. Subsequent to October 31st, 1922, we are informed, large amounts were paid to solicitors in connection with the purchase of those properties of the Toronto Power Company, Limited, which were acquired by the Commission under the terms of the so-called "Clean-Up Deal".

Section 9

INVESTMENT IN POWER AND RAILWAY UNDERTAKINGS OWNED OR OPERATED BY THE COMMISSION

The following is a summary of cash advances, bonds and debentures, issued or assumed, bank loans, etc., as at October 31st, 1922, in respect of the Commission's various undertakings. The amount of $169,477,965.68 shown below may be regarded as the permanent capital employed as at the above date, in all operations of the Commission:

has been minimal. A legal department of the Hawkeye-Sec Ins, as indicated, been recently established and better control and enforcement of legal expenses in our previously managed case under the Inter-Ocean Casualty jurisdiction, under which large amounts were paid for legal services to outside consultants.

During the period from October 31st, 1968, to October 31st, 1969, legal fees paid amounted to approximately $[illegible]. This amount included payments made to three individuals of over $25,000 each, and a payment to one firm of over $50,000. With the exception of another payment of $9,000, the remaining amounts are relatively small. Beginning in October 31st, 1969, as are indicated, large amounts were paid to attorneys to reorganize with the problems of these properties of the Inter-Ocean Casualty Company. Initial steps were assigned by the Commissioner under the terms of the so-called "Clean-Up Act".

Section 3

INVESTMENT IN FIXED AND RELATED PROPERTIES
... BASIS OF VALUATION AT THE DEPRECIATION

The relieving in a summary of cash advances, bonds and debentures, issued to insurance, bank loans, etc., as of October 31st, 1972, in respect of the Investment's various subsidiaries. The amount of $[illegible] shown below may be regarded as the permanent capital employed as of the above date, in all operations of the Investment.

Niagara and other Power Systems including the Queenston-Chippawa Power Development		
Cash Advanced by Province:		
For Niagara and other Systems	$44,577,234.65	
For Queenston-Chippawa Power Development	61,278,545.52	
To meet deferred interest in respect of the Thunder Bay System	360,915.75	
Bonds and Debentures issued or assumed by the Commission:		
Guaranteed by the Province	35,219,831.95	
Not guaranteed by the Province	8,309,584.72	
Bank Loans Guaranteed by the Province	1,200,000.00	$150,946,112.59
Central Ontario System Bonds Issued by the Province in connection with the purchase of:		
The Central Ontario System	$ 8,350,000.00	
The Bruton Township Pulpwood Limits.....	225,000.00	
Cash Advanced by the Province for the purpose of making extensions and improvements	3,532,858.78	12,107,858.78
Hydro-Electric Radial Railways:		
Bonds and Debentures issued by the Commission:		
Guaranteed by the Province	$ 5,314,000.00	
Not Guaranteed by the Province	150,000.00	
Balance owing by the City of Guelph on account of Purchase Price of Guelph Radial Railway	144,994.31	
Bank Loans:		
Guaranteed by the Province	500,000.00	
Not Guaranteed by the Province	315,000.00	6,423,994.31
Total		$169,477,965.68

Algoma and other Lower Canadian Railway
... the Quebec-Ontario Inter-Provincial
Land Advanced by Province:

The Algoma and other Systems 144,471,000.00
The Quebec-Ontario Inter-
Provincial Railway Land
Development 61,872,000.00
So much further interest in respect
of the Bonds for Grants 320,372.76

Bonds and Debentures issued or
assumed by the Dominion:

Guaranteed by the Province 30,112,121.00
Not guaranteed by the Province 7,300,000.72

Bond loans guaranteed by the Province 1,000,000,000.00

Central Ontario System bonds issued
by the Province in accordance with
the provisions of:

The Central Ontario System ..... $ 6,000,000.00
The Grand Junction Railway Guaranteed Limited 250,000.00
Land advanced by the Province for the
purpose of making extensions and
improvements 3,000,000.00 12,100,000.00

Pulp-Electric Central Railway:

Bonds and Debentures issued by the
Dominion:

Guaranteed by the Province ..... $ 8,314,000.00
Not Guaranteed by the Province 180,000.00

Balance owing by the City of Guelph
on account of Provincial Price
of Guelph Central Railway 144,471.01

Bond Loans:

Guaranteed by the Province 200,000.00
Not Guaranteed by the Province 314,000.00 1,000,000.01

Total $1,000,000,000.00

Section 10

CONSOLIDATED BALANCE SHEET

The Annual Reports of the Auditor of the Accounts of the Commission do not include a consolidated balance sheet of all its undertakings. For the purpose of exhibiting the magnitude of the business of the Commission and to permit comparison of the results with those obtained in large private business enterprises, we deemed it expedient to have prepared a consolidated balance sheet of all the power undertakings constructed or acquired and operated by the Commission under the provisions of The Power Commission Act and The Ontario Niagara Development Acts. Such a balance sheet as of October 31st, 1922, has, accordingly, been prepared by our Accountants in pursuance of our instructions and is inserted herein as page 38.

The assets and liabilities of the Central Ontario System and of Hydro-Electric Railways administered by the Commission are not included therein but are exhibited on separate balance sheets.

The value placed on capital assets of the undertakings, including generating plants, transmission lines, transforming stations and other plant and equipment, is the actual cost thereof and upon this capital cost depends in a large measure the revenue of the Commission, consisting as it does of fixed charges on capital cost as one of the component elements of the cost of power collected from municipalities. The capital cost is easily determined as the assets were acquired entirely by the issue or assumption of bonds and debentures to the amount of $43,529,416.67, of which

Section 19

Consolidated Balance Sheet

The general importance of the failure of the Commission to give the consolidated balance sheet of all its undertakings, for the purpose of realizing the complexity of the business of the Commission and to permit comparisons of the results with those obtained in large private business enterprises, we thought it expedient to have prepared a consolidated balance sheet of all the power undertakings controlled or directed and operated by the Commission using the provisions of the Power Commission Act and the Ontario Hydro Development Act. Such a balance sheet as of October 31st, 1928, has, accordingly, been prepared by the Commission in pursuance of our instructions and is inserted herein on page 31.

The assets and liabilities of the Central Ontario System and of Niagara-Welland Hydro-Electric Power by the Commission are not included herein but are exhibited in separate balance sheets.

The value placed on capital assets of the commission, including generating plants, transmission lines, transformer stations and other plant and equipment, in the annual debt interest and upon this capital must depend in a large measure the success of the Commission, considering as it does at first sight an capital sum in use in the government element of the sum of power utilized from municipalities. The capital cost is usually determined as the assets were acquired entirely by the issue or exchange of bonds and debentures to the amount of $20,000,000.00, or which

A P P E N D I X

CAPITAL ASSETS:

Generating plants, transformers and distribution-
ing stations, transmission lines, distribu-
tion systems, etc.
Service Buildings (Toronto Station and
Coburg)
Office Buildings (Toronto)
Tools, Office Equipment, etc.
Rights and privileges, franchises, per-
mits and property

ASSETS NOT IN USE:

Construction and maintenance materials and equipment
Power, generation, supply lines and meters
Miscellaneous materials
Unamortized Discount on Long Term Debt
on current issues
Claims Receivable:
Amount A. G. Albright- secured
Amount due from Ontario Government in
respect of income taxes paid
Amount due from the Province of Ontario
(since paid)
Debentures of the Commission due 1947
purchased in 1919, par value $10,000
(since paid)

DEFERRED CHARGES:

Comprising:
Toronto to Fort Credit Railway being the amount
expended upon the purchase of right-of-way, con-
struction, engineering, administration expenses and
interest.

ASSETS PERTAINING TO OTHER YEARS:

Power and other power commitments in the Niagara River
being that portion of interest on the Niagara Development
which was deferred to October 31, 1922.

DEFERRED CHARGES:

Discount, Exchange, Insurance premiums, prepaid interest,
Insurance, etc.

HYDRO-ELECTRIC POWER
BALANCE SHEET - POWER UNDERTAKINGS
AS AT

A S S E T S

CAPITAL ASSETS:		
Generating plants, transformer and distributing stations, transmission lines, distribution systems, etc.	$137,687,037.03	
Service Buildings (Toronto Hamilton and Cobourg)	496,444.96	
Office Buildings (Toronto)	660,357.16	
Tools, Office Equipment, etc.	213,094.71	$139,056,933.86
Water Rights and privileges, franchises, contracts and goodwill		9,885,355.28
		$148,942,289.14
BALANCE OWING ON SALE of Walkerton Quarry - Secured by Mortgage		260,000.00
SINKING FUND DEPOSITED with Provincial Treasurer, including $30,500 deposited with the Canada Trust Company		1,484,663.19
CURRENT AND WORKING ASSETS:		
Construction and maintenance materials and supplies	1,471,216.39	
Power, construction, supply sales and sundry accounts receivable	2,901,819.90	
Amount owing by Toronto and York Radial Railway on current account	227,973.60	
Claims Receivable:		
Against J. J. Albright- secured $295,633.20		
Against Dominion Government in respect of income taxes paid for the thirteen months ending December 31, 1921, which should be recoverable 72,334.46	367,967.66	
Amount due from the Province of Ontario (since paid)	561,853.49	
Debentures of the Commission due 1957 purchased in 1918, par value $115,000 (since sold)	79,844.50	
Cash in banks and on hand	3,202,322.13	8,812,997.67
CASH ADVANCED TO AND INVESTED in Hydro Radial Railways Comprising: Toronto to Port Credit Railway being the amount expended upon the purchase of right-of-way, surveying, engineering, administrative expenses and interest		780,035.74
AMOUNT RECEIVABLE out of future revenues from the City of Port Arthur and other power consumers on the Thunder Bay System being that portion of interest on the Nipigon Development which was deferred at October 31, 1922. -		318,320.65
DEFERRED CHARGES to future operations being unamortized bond discount, American exchange premiums, prepaid interest, insurance, etc.		1,554,163.95
		$162,152,470.34

LIABILITIES

PROVINCIAL TREASURER:		
Cash advances for Niagara and other systems	$44,577,234.65	
Cash advances for Queenston-Chippawa Power Development	61,278,545.52	
Portion of interest on investment in Thunder Bay (Nipigon) System - the payment of which is deferred	360,915.75	$106,216,695.92
Unexpended portion of the sum appropriated by the Legislature to cover expenditures by the Commission for the account of the Province		58,230.11
OUTSTANDING STOCK of the Toronto Power Company Limited (par)		1,150.00
BONDS AND DEBENTURES issued or assumed by the Commission in connection with the purchase of the Ontario Power Company, the Toronto Power Company and other power properties		
Guaranteed by the Province	35,219,831.95	
Not guaranteed by the Province	8,309,584.72	43,529,416.67
ADVANCES BY THE BANK OF MONTREAL in connection with the construction of the third pipe line of the Ontario Power Company, (secured by hypothecation of $1,400,000 1st Mortgage 5% Bonds of the Ontario Power Company and guaranteed by the Province)		1,200,000.00
OTHER LIABILITIES:		
Accounts payable and accrued charges	1,071,754.31	
Accrued interest payable	507,062.14	
Insurance Claims and Awards	638,547.86	
Central Ontario System - cash held on Deposit for that system	363,400.20	
Hydro-Radial Railways - cash held on Deposit for them	69,310.64	2,650,075.15
RESERVES:		
For renewal of plant and equipment	4,865,359.87	
For sinking fund for the repayment of cash advances by the Province and for the retirement of Bonds and Debentures issued or assumed by the Commission	2,677,947.09	
For contingencies	698,786.37	8,242,093.33
UNDISTRIBUTED CREDIT BALANCES on storehouse and power companies' operation		254,809.16
CONTINGENT LIABILITIES:		
In respect of contracts entered into for works under construction	$2,138,207.69	
		$162,152,470.34

L I A B I L I T I E S

BONDS AND DEBENTURES ISSUED OR ASSUMED BY THE COMMISSION, GUARANTEED BY THE PROVINCE OF ONTARIO

Description	Amount
Forty-year 4% debentures of the Commission, maturing August 1, 1957, issued to cover the purchase of the capital stock of The Ontario Power Company of Niagara Falls	$8,000,000.00
Twenty-year 6% debentures of the Commission, maturing July 1, 1941, issued for the purpose of retiring an issue of The Ontario Power Company which matured in 1921	3,200,000.00
Twenty-year 6% Bonds of the Commission, maturing December 1, 1940, issued to cover the purchase price of the capital stock of The Toronto Power Company, Limited, and certain electrical power equipment of the Toronto and York Radial Railway	619,000.00
Forty-year 4½ debentures of the Commission, maturing June 1, 1958, issued in connection with the purchase of the Essex System	200,000.00
Ten-year 5% debentures of the Commission, maturing June 1, 1928, issued in connection with the purchase of the Essex System	26,000.00
Forty-year 4% debentures of the Commission, maturing December 1, 1958, issued to cover the purchase price of the Thorold System	100,000.00
First Mortgage 5% Gold Bonds of The Ontario Power Company, due February 1, 1943, issued and outstanding ($1,400,000 pledged with Bank of Montreal as security for loan of $1,200,000 to the Hydro-Electric Power Commission)	9,092,000.00
First Mortgage 5% Gold Bonds of The Ontario Transmission Company, Limited, due Mayl, 1945	1,599,000.00
Guaranteed 4-1/2% debenture stock of The Toronto Power Company due May 1, 1941, guaranteed by the Hydro-Electric Power Commission and the Province of Ontario	12,383,831.95
Total shown in Foregoing Balance Sheet	$35,219,831.95

[illegible] and [illegible] issued in payment of the Commission's
Statement of the position of capital

Particulars	Amount
Forty-year 5% debentures of the Commission, maturing August 1, 1967, issued to cover the purchase price of the original plant of the Ontario Power Company of Niagara Falls	[illegible]
Twenty-year 6% debentures of the Commission, maturing July 1, 1941, issued for the purpose of retiring an issue of the Ontario Power Company which matured in 1921	[illegible]
Twenty-year 5% bonds of the Commission, maturing December 1, 1940, issued to cover the purchase price of the original plant of the Niagara Power Company, Limited, and certain electrical power equipment of the Toronto and Niagara Railway Company	[illegible]
Forty-year 5% debentures of the Commission, maturing June 1, 1966, issued in exchange with the purchaser of the Niagara System	[illegible]
Two-year 5% debentures of the Commission, maturing June 1, 1941, issued in exchange with the purchaser of the Niagara System	[illegible]
Twenty-year 4% debentures of the Commission, maturing December 1, 1959, issued to cover the purchase price of the Thorold System	100,000.00
Five Savings 5% Gold Bonds of the Ontario Power Company, due February 1, 1943, issued and outstanding ($4,464,000 pledged with Bank of Montreal as security for loan of $1,464,000 to the Hydro-Electric Power Commission)	[illegible]
Five Savings 5% Gold Bonds of the Niagara Transmission Company, Limited, due Sept. 1, 1942	[illegible]
Guaranteed 4-1/2% debenture stock of the Ontario Power Company due May 2, 1941, guaranteed by the Hydro-Electric Power Commission and the Province of Ontario	[illegible]
Total above is foregoing Balance Sheet	[illegible]

BONDS AND DEBENTURES ISSUED OR ASSUMED BY THE COMMISSION
OR BY COMPANIES CONTROLLED BY THE COMMISSION,
NOT GUARANTEED BY THE PROVINCE

Description	Amount
Debentures assumed by the Commission in connection with certain properties now included in the Muskoka System	$ 44,884.72
5% Mortgage Bonds of the Toronto Power Company, due July 1, 1924, secured by Preference Stock of the Electrical Development Company of Ontario, Limited, and guaranteed by the Toronto Railway Company	4,103,200.00
First Mortgage, 5% Gold Bonds of the Electrical Development Company of Ontario, Limited, due May 1, 1941	4,161,500.00
Total Shown in Foregoing Balance Sheet	$8,309,584.72

NOTE 1(c) INVENTORIES LISTED ON LEDGERS AT THE CONCLUSION
OF 1ST FISCAL EXPIRATION AT THE DEPARTMENT,
_____ ARE DISCLOSED IN THE DETAILS.

Detailing

Operations carried by the Provincial
in accordance with certain purpose-
vise not included in the Province
Sydney .....$ 44,404.73

Of Surplus Stock of the Province
River Complex, as July 1, 1966,
received by Provincial Stock of the
Provincial Investigation Company of
Saskatoon, Limited, was purchased by
the Provincial Holding Company $1,100,000.00

Plus Surplus, of this Stock of
the Provincial Investment Com-
pany of Saskatoon, Limited, as
July 1, 1971 .....$21,000.00

Total Funds in Provincial Holding Fund $2,303,304.73

the sum of $35,219,831.95 was guaranteed by the Province; by the employment of the proceeds of a demand loan of $1,200,000 from the Bank of Montreal, also guaranteed by the Province; and by advances from the Province which have aggregated $106,216,695.92. Apart from a complete valuation of the fixed assets, their real value cannot be determined by the test applicable to a business operated for purposes of profit to the owners, namely, the extent of that profit, but only by considering the proportion that fixed charges in respect of capital cost bear to the total cost of power. It is quite evident that excessive or extravagant expenditures in the construction or acquisition of works and properties materially increases the price of power when such price is on a cost basis.

The total amount at the credit of sinking fund accounts on October 31st, 1922, was $2,677,947.09. Of this amount, on that date, there had been paid to the Treasurer of the Province or invested in Provincial securities which were delivered to the Treasurer, the sum of $1,484,663.19. The difference of $1,193,283.90 was made up of cash and Provincial securities in the hands of the Commission.

A portion of this $1,193,283.90 represented amounts credited to sinking fund accounts in respect of bonds issued or assumed by the Commission, the greater part of which have been guaranteed by the Province. The Commission claims that it has the right to retain this portion of sinking funds and that it is not required to invest such funds in Provincial securities or deliver the securities to the Treasurer of the Province. In view of

the sum of $22,347,281.36 was guaranteed by the Province, by the mortgagees of the property of a Second Lien of $3,000,000 from the Bank of Montreal, also guaranteed by the Province; and by interest from the Province which have aggregated $222,234,672.32. Apart from a capital valuation of the fixed assets, their true value cannot be determined by the best appliances in a business equipped for purposes of profit to the owners, namely, the nation at large worth, but only by capitalizing the payments that first charges in respect of capital work bear to the total cost of power. It is quite evident that excessive or extravagant expenditures in the construction or equipping of works not productive materially increases the price of power when such price is on a cost basis.

COPY

The total amount of the debt of Ontario that accrued on October 31st, 1923, was $2,077,947.00. Of this amount, at that date, there had been paid to the Treasury of the Province or invested in Provincial securities which were delivered to the Treasury, the sum of $1,494,303.12. The difference of $1,583,643.91 was made up of such and Provincial securities in the hands of the Commission.

A portion of this $1,583,643.91 represents amounts received in closing fixed accounts in respect of which issues or amounts by the Commission, the greater part of which have been guaranteed by the Province. The Commission claims that it has the right to retain this portion of receipts and that it is not required to hand such funds to provincial Ministries or deliver the securities to the Treasury of the Province. In view of

the express provisions of The Power Commission Act that all payments on sinking fund account from municipal corporations and others must be so invested and the securities so delivered, the contention of the Commission is incomprehensible, excepting in those cases where it is otherwise provided in the agreements with the bondholders.

The Auditor of the accounts of the Commission has informed us that he considers the values placed on current and working assets to be fair and sound, and that the accounts receivable may be considered as all collectible, although some of relatively small amount are disputed.

The demand loan from the Bank of Montreal involves the payment of interest at a higher rate than prevails in respect of Provincial borrowings at present, and it would seem that it might well be liquidated by the issue of debentures of the Commission or otherwise, and a saving in payment of interest thus effected. The financing of permanent works by means of bank loans is not consistent with good business practice.

The reserve for contingencies consists largely of amounts set aside in respect of the properties of The Ontario Power Company and the Toronto Power Company, and is commented upon in a subsequent section of this report.

On page 44 will be found a statement of the reserves at October 31st, 1922, according to undertakings; the totals of which are shown in the foregoing Balance Sheet.

the strong partisans of the Power Development Act, that it represents an existing Crown company from municipal electrical interests and others over to private interest and the servitude to Ontario, the existence of the Commission is unnecessary, anything in view seems there is no attractive practical in the agreements with the Commission.

The policy of the reserve of the Commission has between on that he considers the values placed on current and existing assets to be fair and sound, and that the economic servitude can be maintained on all conditions, although some of relatively small amount now disputed.

The Annual Loss from the Sale of Current Involves the payment of interest at a higher rate than the Province is charged at Provincial Debentures as present, but it could seem that it might well be liquidated by the issue of debentures of the Commission or otherwise, and a saving in payment of interest also effected. The financing of government works by means of bank loans is not consistent with good business practice.

The reserve for contingencies consists largely of amounts set aside in respect of the properties of the Niagara Power Company and the Toronto Power Company, and is governed upon in a subsequent section of this report.

In June it will be found a statement of the reserves at December 31st, 1927, according to construction; the totals of which are shown in the attached Balance Sheet.

On page 45 is a balance sheet of Hydro-Electric Radial Railways operated by the Commission.

Included in the balance sheet of Hydro-Electric Radial Railways under the caption of "Bonds and Debentures issued by the Commission and guaranteed by the Province" is an amount of $2,039,000, forty-year, 4½%, debentures, given in satisfaction of the purchase price of the capital stock and properties of the Sandwich, Windsor & Amherstburg Railway and its subsidiary, the Windsor & Tecumseh Electric Railway. Of this total, debentures to the amount of $1,250,000 were delivered to the vendors at the time the properties were transferred to the Commission. The remaining debentures amounting to $789,000 were deposited with the National Trust Company of Toronto as security for the payment of a like amount of first mortgage bonds outstanding against the properties at the date of transfer.

Since that time, the vendors (Detroit United Railways) have retired $110,000 of these first mortgage bonds and a like amount of debentures of the Commission has been delivered to them by the National Trust Company, so at October 31st, 1922, there had been delivered to the vendors of the property $1,360,000 of debentures of the Commission, and the remaining $679,000 continued to be held by the National Trust Company and will be delivered to the vendors as and when they retire the remainder of the $679,000 outstanding first mortgage bonds now forming a lien upon the properties acquired by the Commission.

On page 43 is a balance sheet of Ryan-Riverside Radial Railways operated by the Consolidation.

Included in the balance sheet of Ryan-Riverside Radial Railways under the caption of "Bonds and Debentures issued by the Consolidation and guaranteed by the Overlook" is an amount of $8,500,000. Construction, equipment, power to substitution of the payment price of the capital stock and preferred of the Consolidation, "Overlook's Administration Building and its subsidiary, the Overlook & Vineyard Electric Railway, in its total, determines to the amount of $1,291,300 were expended in the Consolidation for the purchase of properties were transferred to the Consolidation. The remaining indebtedness amounting to $708,000 were expended by the National Trust Company of Toronto as security for the payment of a like amount of First mortgage bonds outstanding against the properties at the date of transfer.

Since that time, the vendors (Radial Railway) have received $119,000 of these First mortgage bonds and a like amount of debentures of the Consolidation was been delivered to them by the National Trust Company, on or about 31st, 1928, there had been delivered to the vendors of the property $1,841,000 of debentures of the Consolidation, and the remaining $170,000 remained to be held by the National Trust Company and will be delivered to the vendors as and when they retire the remainder of the $170,000 outstanding first mortgage bonds and receive a lien upon the properties acquired by the Consolidation.

STATEMENT OF RESERVES

AS AT OCTOBER 31, 1922.

SYSTEM	Reserves For		
	Renewals	Sinking Fund	Contingencies.
Niagara Lines and Stations	$ 2,475.421.02	$ 1,302,984.51	$ 4,853.87
Queenston-Chippawa Power Development (#)	-	-	-
Ontario Power Company	1,387,736.85	488,858.51	189,924.84
Toronto Power Company Limited	363,915.85	459,635.60	434,012.43
Toronto Greater Niagara System	4,227,073.72	2,251,478.62	628,791.14
Thunder Bay	42,433.51	22,115.45	4,601.65
Severn	132,743.72	83,613.38	29,220.08
St. Lawrence	64,743.78	27,677.90	6,255.17
Wasdells	38,564.12	18,022.69	6,068.13
Eugenia	137,200.69	39,047.86	12,801.38
Ottawa	434.59	353.12	-
Muskoka	15,215.17	4,824.05	3,375.57
Rideau	33,771.00	-	7,673.25
Essex	47,954.04	20,211.54	-
Thorold	3,937.46	86,911.41	-
Bonnechere River Storage Dams	-	5,936.99	-
Service Buildings	111,984.52	52,676.94	-
Office Buildings	12,303.55	67,377.16	-
Totals	$ 4,865,359.87	$ 2,677,947.09	$698.786.37

(#)The Queenston-Chippawa Power Development not yet completed.

STATEMENT OF INCOME

YEAR ENDED DEC. 31, 1949

Account	Amount	Prior Year	Increase or (Decrease)
Higgins-Jones and Stations	$ 6,488-42.01	$ 5,977,[illegible]-94	[illegible]-67
Structure-Clinton Town Development (1)	-	-	-
Electric Power Company	[illegible]	[illegible]	[illegible]
Private Power Stations Station	[illegible]	[illegible]	[illegible]
Income Before Income Taxes	4,[illegible]-72.38	3,[illegible]-72.62	[illegible]-16
Taxes			
Income Tax	[illegible]	[illegible]	[illegible]
Excess	[illegible]	[illegible]	[illegible]
Ad Valorem	[illegible]	[illegible]	[illegible]
Payroll	[illegible]	[illegible]	[illegible]
Imports	[illegible]	[illegible]	[illegible]
Fixed	[illegible]	[illegible]	-
Business	[illegible]	[illegible]	[illegible]
Sales	[illegible]	-	[illegible]
Other	[illegible]	[illegible]	-
Total	[illegible]	[illegible]	-
Depreciation Plant Income Base	-	[illegible]	-
Service Reserve	[illegible]	[illegible]	-
Gifts-Donations	[illegible]	[illegible]	-
Total	$ 4,[illegible]-07	$ 3,[illegible]	[illegible]

(1) Due Zimmerman-Dickinson Power Development not yet completed

HYDRO-ELECTRIC POWER
BALANCE SHEET
AS AT

A S S E T S

RADIAL RAILWAY PROPERTIES:		
Road and Equipment Rights, Franchises and goodwill of -		
The Sandwich, Windsor and Amherstburg Railway	$2,876,422.74	
The Guelph Radial Railway	395,377.65	
The Toronto and York Radial Railways	2,510,160.57	$5,781,960.96
Expended upon the purchase of Right-of-Way Construction materials less resales, Surveying, Engineering, Administrative Expenses and interest for the construction of -		
The Toronto-Port Credit Radial Railway	$ 780,035.74	
The Port Credit-St. Catharines Radial Railway	481,192.37	1,261,228.11
INVESTMENTS:		
City of Windsor 4½% Debentures due April 1, 1960, (since sold)		190,000.00
CONSTRUCTION and Maintenance, Materials and Supplies, Office Stationery, etc.		263,115.42
OTHER ASSETS:		
Cash in banks and on hand	$ 228,950.03	
Hydro-Electric Power Commission - Cash held on deposit for Hydro-Radial Railways	69,310.64	
Accounts Receivable	33,099.63	
Due by the City of Guelph on account of the operating deficit of the Guelph Radial Railway	15,062.78	346,423.08
DEFERRED CHARGES to future operations being valuation and other expenses, prepaid insurance, etc.		61,074.75
		$7,903,802.32

COMMISSION OF ONTARIO
HYDRO RADIAL RAILWAYS
OCTOBER 31,1922

LIABILITIES

BONDS AND DEBENTURES issued by the Commission in connection with the purchase and rehabilitation of the Sandwich, Windsor and Amherstburg Railway, the Guelph Radial Railway and the Toronto and York Radial Railways		
Guaranteed by the Province	$5,314,000.00	
Not guaranteed by the Province	150,000.00	$5,464,000.00
AMOUNT owing to the City of Guelph in connection with the purchase of the Guelph Radial Railway, payable in half-yearly installments as per purchase agreement	$ 150,000.00	
Less - Two installments paid	5,005.69	144,994.31
BANK LOANS:		
Advances to the Commission by the Bank of Montreal		815,000.00
HYDRO-ELECTRIC POWER COMMISSION:		
Cash advanced by the Commission to meet expenditures in connection with the Toronto-Port Credit Radial Railway		780,035.74
OTHER LIABILITIES:		
Accounts Payable	$ 151,027.48	
Accrued Interest Payable	89,541.80	
Amount owing to the Toronto Power Company on current account	227,973.60	
Provision for Claims and for Injuries and damages	17,444.25	
Provision for unredeemed tickets	6,830.00	492,817.13
RESERVE available for the payment to the City of Toronto of an amount(not yet determined) owing in respect of the operation of the Section of the Metropolitan Division in the City Limits and for the renewal of plant and equipment		120,345.26
RESERVE created by installments paid on the purchase price of the Guelph Radial Railway out of revenues of the road and assessments against the City of Guelph		5,005.69
PREMIUM received on the sale of the Commission's Debentures		73,166.67
SURPLUS of the Sandwich, Windsor abd Amherstburg Railway		8,437.52
		$7,903,802.32

CONTINGENT LIABILITY in respect of contracts entered into for construction materials $85,383.73

STATEMENT OF BONDS AND DEBENTURES ISSUED BY THE COMMISSION
IN CONNECTION WITH HYDRO-ELECTRIC RADIAL RAILWAYS
AS AT OCTOBER 31, 1922.

Outstanding Bonds and Debentures issued by the Commission and guaranteed by the Province.

Forty-year, 4½% Bonds of the Commission due April 1st, 1960, issued to cover the purchase price of the capital stock and assets of the Sandwich, Windsor & Amherstburg Railway (Total issue $2,100,000)	$2,039,000.00
Forty-year, 6% Debentures of the Commission due July 1st, 1961, issued in connection with rehabilitation of the Sandwich, Windsor & Amherstbury Railway	900,000.00
Twenty-year 6% Debentures of the Commission given in purchase of the capital stock of the Toronto and York Radial Railway Company and the Schomberg and Aurora Railway Company	2,375,000.00
	$5,314,000.00
Ten-year, 6% Bonds of the Commission due May 1st, 1931, (not guaranteed by the Province) issued in connection with the rehabilitation of the Guelph Radial Railway	150,000.00
	$5,464,000.00

Statement of Advances by the Bank of Montreal to the Commission to meet Expenditures in respect of Hydro-Electric Radial Railways.

Advances to the Commission by the Bank of Montreal:

For rehabilitation of the Sandwich, Windsor & Amherstburg Railway (secured by hypothecation of $61,000 Hydro Radial Debentures issued by the Commission and $190,000 Debentures of the City of Windsor)	$ 200,000.00
For rehabilitation of the Guelph Radial Railway (as security for this loan the Bank of Montreal holds $150,000 Hydro Radial Debentures of the Commission, which have been signed by the Chairman but not by the Secretary nor has the Commission's seal been affixed thereto)	115,000.00
For expenditures made in connection with the Port Credit and St. Catharines Railway (secured by hypothecation of $1,200,000 Hydro Radial Debentures, being part of the issue of $11,360,363 guaranteed by the Province of Ontario)	500,000.00
	$ 815,000.00

STATEMENT OF BONDS AND DEBENTURES ISSUED BY THE COMMISSION
IN CONNECTION WITH RIGHT-BANKING RAILS SECTION
AS AT DECEMBER 31, 1929.

Outstanding Bonds and Debentures issued by the Commission and guaranteed by the Province.

Sixty-year, 4½% Bonds of the Commission due April 1st, 1980, issued to cover the purchase price of the capital stock and assets of the Industry, Kinkaro & Waterfront Railway (Total issue $1,100,000) $2,387,000.00

Sixty-year, 4% Debentures of the Commission due July 1st, 1981, issued in connection with rehabilitation of the Industry, Pinkerton & Lakeshore Railway ..... 8[illegible],000.00

Twenty-year 4% Debentures of the Commission given in payment of the capital stock of the Toronto and Port Dale Railway Company and the Kaminsky and Grove Railway Company ..... [illegible]

$2,314,000.00

COPY

One-year, 6% Bonds of the Commission due May 1st, 1931, last guaranteed by the Province) issued in connection with the rehabilitation of the Dwight Valley Railway ..... [illegible]

$2,[illegible],000.00

Statement of advances by the Bank of Montreal to the Commission in part liquidation in respect of Right-Bankers Rails Railway.

Advances to the Commission by the Bank of Montreal:

For rehabilitation of the Industry, Kinkaro & Waterfront Railway (secured by hypothecation of $1,[illegible] Right Debentures issued by the Commission and $[illegible] Debentures of the City of Kinkaro) ..... $ [illegible]

For rehabilitation of the Dwight Valley Railway (an security for this loan the Bank of Montreal holds $[illegible],000 Right Debentures of the Commission, which have been signed by the Chairman but not by the Secretary and the Commission's seal has been affixed thereto) ..... [illegible]

For expenditures made in accordance with the Port Dwight and Kaminsky Railway (secured by hypothecation of $[illegible],000 Right Debentures, being part of the issue of $[illegible] guaranteed by the Province of Ontario) ..... [illegible]

$ [illegible]

For information concerning debentures deposited with the Commission by the municipalities and bonds issued by the Commission in respect of the proposed Toronto-St. Catharines Radial Railway, we refer you to our report on "Hydro-Electric Radial Railways", dated September 7th, 1923.

We include herein as page 48 a balance sheet as at October 31st, 1922, of the Central Ontario System which is owned by the Province and operated by the Commission. For details concerning the properties comprising this undertaking and the operating results thereof, we refer you to our report on "Central Ontario System", dated March 2nd, 1923. At the time the foregoing report was prepared, only tentative results were available for 1922 operations and on the basis of these tentative results the total operating deficit to October 31st, 1922, was stated at about $207,000. Since that time the Commission decreased its renewal rates and made sundry other adjustments reducing the deficit of $207,000 to $155,119.54 which amount is shown in the balance sheet included herewith.

Section 11

PROPERTY ACCOUNTS

Our Accountants have prepared a summary of the property account of the power undertakings of the Commission, exclusive of the Central Ontario System, which shows the following:

The information concerning statistics imported with the Commission by the municipalities has been issued by the Commission in support of the proposed Toronto-Co. Contingent Rental Rating, as given you in the report on "Toronto-Electric Rental Rating", dated September 7th, 1924.

We include herein on page 43 a balance sheet as at October 31st, 1923, of the Central Ontario System which is owned by the Commission and operated by the Commission. For details concerning the properties comprising this undertaking and the operating results thereof, we refer you to our report on "Central Ontario System", dated June 2nd, 1924. In this also the forecasting report was prepared. Only monthly results were available for 1923 operations and on the basis of those tentative results the total operating deficit to October 31st, 1923, was stated at about $207,000. After that time the Commission discussed its revenue rate and made monthly other adjustments regarding the deficit or lack, and to Dec.31st which account is shown in the balance sheet included herewith.

Section 13

Capital Accounts

The Commission have prepared a summary of the property accounts of the power undertakings of the Commission, relative to the Central Ontario System, which shows the following:

APPENDIX

CAPITAL EXPENDITURE - (including intangible values)

General Statistics		
Lower Churchill and Upper Ilford Plant		60,000,000.00
Transformer Stations	58,572.00	
Transmission Lines	1,572,572.00	1,631,144.00
Local Utilities - Hydro, Water, Gas		
Gas Service Building		12,572,572.00
Service Buildings		17,572,572
Industry		
Lower Churchill and Upper Plant	450,000.00	
Transformer Stations	14,572.00	
Transmission Lines	14,572.00	5,572,572.00
Local Utilities - Hydro		150,000.00
Rural Lines		14,572.00
Tilquill and Tilquent Areas		2,572.00
Tools and Equipment		14,572.00
		12,572,572.00
Buildings		
Development of the Town of Tegonna	12,572.00	
Development of the Town of Grenton	12,572.00	
Annual Interest Charges	12,572.00	12,572.00
CONSTRUCT AND MAINTAIN LANDING:		
Dam in Kenny	5,000.00	
Upper Churchill (Lara Canyon)	14,572.00	
Upper-Lower Power Connection of Ontario	250,000.00	
Minerals and Supplies	10,000.00	10,572,572.00
INCREASE MEANS OF INTER CONNECTION:		
Tripple Squares	12,072.00	
Improve Microwave, re-insulation of transmission lines	12,572.00	24,572.00
MISCELLANEOUS:		142,572.00
		12,572,572.00

CENTRAL ONTARIO

BALANCE SHEET

A S S E T S

CAPITAL ASSETS- (including intangible values)		
Central Ontario		
Power Developments and Hydraulic Rights	$6,155,445.01	
Transformer Stations	725,237.53	
Transmission Lines	1,570,974.29	$8,451,656.83
Local Utilities - Electric, Water, Gas and Street Railway		2,534,518.81
Service Buildings		17,477.57
Nipissing		
Power Development and Steam Plant	425,406.89	
Transformer Stations	36,177.40	
Transmission Lines	43,322.00	504,906.29
Local Utilities - Electric		199,842.68
Rural Lines		34,328.16
Pulpmill and Pulpwood Areas		506,182.96
Tools and Equipment		56,775.86
		$12,305,689.16
INVESTMENTS:		
Debentures of the Town of Napanee	19,637.66	
Debentures of the Town of Trenton	12,499.15	
Accrued Interest thereon	1,240.88	33,377.69
CURRENT AND WORKING ASSETS:		
Cash in Banks	2,286.14	
Accounts Receivable (less Reserve)	220,467.63	
Hydro-Electric Power Commission of Ontario	363,400.20	
Materials and Supplies	359,629.01	945,782.98
DEFERRED CHARGES TO FUTURE OPERATIONS:		
Prepaid expenses	26,044.94	
Deferred Maintenance, re-insulation of transmission lines	28,438.87	54,483.81
OPERATING DEFICIT:		155,119.54
		$13,494,453.18

SYSTEM

OCTOBER 31,1922.

LIABILITIES

PROVINCIAL TREASURER (ONTARIO)		
Purchase price of System paid by the Province in 4% debentures due March 1, 1926,	$8,350,000.00	
Cash advances by the Province	3,532,858.78	
Debentures (5% due 1927) issued by the Province in connection with the purchase of the Bruton Township Pulpwood Areas	225,000.00	$12,107,858.78
CURRENT AND ACCRUED LIABILITIES:		
Accounts Payable and Accrued Charges	111,317.11	
Consumers' Deposits	13,276.37	
Unearned Water Rents	2,400.00	
Due Municipalities (Paid in excess of power costs)	4,278.65	131,272.13
RESERVES:		
For renewals	$1,179,922.25	
For Sinking Fund	37,342.02	
For contingencies	38,058.00	1,255,322.27
		$13,494,453.18

[illegible]

Prepaid expenses
Deferred Maintenance, re-installation of
transmission lines

[illegible]

Particulars	Amount	Per cent. of Total
Power Developments	$98,892,319.62	66.41%
Transmission Lines	22,140,688.96	14.86%
Transformer and Distributing Stations	15,474,198.98	10.39%
Rural Lines	1,115,205.24	0.74%
Water rights, franchises, goodwill, etc.	9,885,355.28	6.64%
Miscellaneous Buildings, tools, etc.	1,434,521.06	0.96%
	$148,942,289.14	100.00%

The foregoing indicates that 66.41% of the total capital investment is represented by power developments, while 6.64% is represented by intangibles, which, for the most part, represent water rights at Niagara Falls acquired in connection with the purchase of The Ontario Power Company and the Toronto Power Company. If the intangibles were grouped with power developments, as they might be, 73% of the total investment would be represented by power developments, which leaves 27% for transmission lines, transformer stations and so forth.

In addition to the amounts shown above in respect of rural lines, the Commission charged $202,953.07 to the Province up to October 31st, 1922, on account of bonuses receivable from the Province under authority of the Rural Hydro-Electric Distribution Act, 1921. If this amount were added to the total shown in the foregoing statement, the total investment in rural lines would amount to $1,318,158.31 at the close of the fiscal year, 1922. We understand that up to October 31st, 1923, the Province had paid bonuses to the Commission on account of the construction of rural lines amounting to $425,000.00

Institution.	Amount	Per cent. of Total
Ontario Municipal Electric Association	$22,312,812.82	66.41%
Transmission Lines	22,140,588.86	14.88%
Transformer and Distributing Stations	12,474,124.34	12.38%
Rural Lines	2,112,222.24	2.72%
Water Rights, Concessions, Franchises, etc.	4,822,222.22	1.84%
Electrical Energy, Tools, etc.	1,474,121.22	1.22%
	41,412,412.12	100.00%

The foregoing indicates that 66.41% of the total capital investment is represented by power distribution, while 6.84% is represented by transmission, which, for the main part, represents water rights or flowage rights which requires in accordance with the provisions of the Ontario Power Company and the Ontario Power Commission. If the distribution were charged with power development, as they might be, 98% of the total investment would be represented by power development, which leaves only the transmission lines, transformer stations and so forth.

In addition to the amounts above shown in respect of rural lines, the Commission expended $127,222.22 in the Province of Quebec Rial, 1922, in respect of lineage practically from the provisions under authority of the Rural Power-Districts Distribution Act, 1922. If this amount were added to the total shown in the foregoing statement, the total investment in rural lines would amount to $1,212,222.22 at the close of the fiscal year, 1922. In conjunction with by the Ontario Rial, 1922, the Province had paid amounts in the Commission on account of the construction of rural lines amounting to $127,222.22

The detailed statement on page 51 also shows that over 90% of the total capital investment in all the undertakings of the Commission is represented by the Greater Niagara System.

Section 12

OPERATING ACCOUNTS

In each of our reports upon the several undertakings of the Commission we have given our conclusions upon the operation of each undertaking. Operating expenses form a relatively small proportion of the total cost of power and it seems unnecessary to comment here upon differences in the operating accounts of the various undertakings, as injustices in the case of one as compared with others are but of slight importance to power consumers. The apportionment of such items as Head Office Expenses requires intricate and exact calculations on the part of the Commission and its officers and seems to be made upon a basis equitable to all concerned. There should be no cause for complaint by any municipal corporation of its proportion of the operating costs apportioned to it and others in the same system. Between systems operating accounts may display greater operating expenses in one than in another, but this is naturally to be expected when consideration is given to the varying extent of the power loads and the location of generating plants. Attention, however, should be drawn to overhead expenses, and the necessity of rigid economy in order to keep these at as low a point as possible, consistent with efficient administration.

The detailed statement on page 81 also shows that over 95% of the total capital investment in all the undertakings of the Commission is represented by the Greater Niagara System.

Section II

CONCLUSION AND RECOMMENDATIONS

In some of our reports upon the several undertakings of the Commission we have given our conclusions upon the operation of each undertaking. Operating expenses form a relatively small proportion of the total cost of power and it seems unnecessary to comment here upon discrepancies in the operating accounts of the various undertakings, as injustice to the case of one as compared with another may not of slight importance to power consumers. The apportionment of rates thereon as that Office deems equitable and exact calculations on the part of the Commission and its officers and seems to be made upon a basis equitable to all concerned. There should be no cause for complaint by any municipal corporation of the application of this apportionment rate. Apportionment to it and others in the same system, between system operating accounts and direct operating expenses in, and then in addition, for this is necessarily to be expected when distribution is given to the varying rates of the power lines and the location of generating plants. Attention, however, should be drawn to overhead expenses, and the necessity of right economy in order to keep these at as low a point as possible, consistent with efficient administration.

Item	Power Generating Capacity	Transformer and Distribution Capacity	Transformer and Distribution Capacity
Transformer Day	8,772,325.31	671,926.84	324,772.04
Sewerage	980,278.21	845,278.21	1,004,772.19
Sewerage Disposal	—	671,000.01	324,772.20
Rudolfia	144,577.35	170,215.79	170,000.01
Stupendia	994,787.34	594,713.21	1,423,000.01
Ottawa	—	—	1,000,000.01
Morganton	121,307.74	241,000.22	3,000.00
Wilmson	786,956.73	141,714.20	20,000.00
Kenton	—	112,821.01	1,000,000.01
Tarvila	—	—	21,000.01
Washington River Storage Dam	34,120.74	—	—
Service Utilities Bureau, Quilliam Industrial	37,000.00	—	—
Utilize Territory Storage	2,000.00	—	—
Tools, Utilize Technical, etc.	27,000.00	—	—
Work in Progress	2,000.00	—	—
Total	4,000,000,000.00	$ 24,327,000,000.00	$22,000,000,000.00

[a] Section 2,000,000 representing Transmission and Distribution Systems service in the Lessons of Dry Gravel and Two Dollar Railway

[b] Includes Item Item 4 Turnip and Smart Street properties.

[c] Includes distributing systems.

HYDRO-ELECTRIC POWER
SUMMARY OF
AS AT

System	Power Developments	Transmission Lines	Transformer and Distributing Stations
Niagara Lines and Stations	$	$ 10,340,535.66(a)	$10,779,068.25
Queenston-Chippawa Power Development	65,642,615.86	-	-
Ontario Power Company	15,233,967.46	2,024,298.30	1,084,725.19
Toronto Power Company Limited	9,652,910.41(b)	6,615,714.08	2,209,574.94
Total Greater Niagara System	$90,528,593.73	$ 18,980,548.04	$14,073,368.38
Thunder Bay	5,772,133.31	631,658.36	238,998.46
Severn	530,275.51	566,276.93	211,549.91
St. Lawrence	-	521,052.01	494,747.25
Wasdells	142,379.35	203,166.79	31,485.22
Eugenia	994,737.54	804,940.51	261,265.66
Ottawa	-	-	1,083.00
Muskoka	131,107.74	54,420.23	9,896.85
Rideau	756,926.70	261,954.20	60,855.90
Essex	-	116,661.89	72,998.96
Thorold	-	-	27,949.39
Bonnechere River Storage Dams	34,165.74	-	-
Service Buildings (Toronto, Hamilton and Cobourg)	-	-	-
Office Buildings (Toronto)	-	-	-
Tools, Office Equipment, etc.	-	-	-
Work in Progress	-	-	-
Total	$98,892,319.62	$ 22,140,688.96	$15,474,198.98
Per Cent to Total	66.41%	14.86%	10.39%

(a) Includes $240,294.00 representing Transmission and Distribution Equipment carried in the Accounts of the Toronto and York Radial Railway

(b) Includes Steam Plant at Toronto and Scott Street properties.

(c) Includes Distributing Systems.

Rural Lines	Water Rights, Franchises Contracts and Goodwill	Miscellaneous	TOTAL	Per Cent To Total
$ 839,540.85	$ -	$ -	$ 21,959,144.76	14.74%
-	-	-	65,642,615.86	44.07%
-	7,304,113.07	-	25,647,104.02	17.22%
-	2,358,837.62	-	20,836,137.05	13.99%
$ 839,540.85	$ 9,662,950.69	$ -	$134,085,001.69	90.02%
-	-	-	6,642,770.13	
10,188.55	124,011.00	-	1,442,301.90	
29,462.82	-	-	1,035,262.08	
14,955.95	-	-	394,007.31	
5,309.90	-	-	2,066,253.61	
24,866.74	-	-	25,949.74	
-	17,366.00	-	212,790.82	
-	-	-	1,079,746.80	
190,880.43(a)	6,900.00	-	387,441.28	9.98%
-	74,127.59	-	102,076.98	
-	-	-	34,165.74	
-	-	496,444.96	496,444.96	
-	-	660,357.16	660,357.16	
-	-	213,094.71	213,094.71	
-	-	64,624.23	64,624.23	
$ 1,115,205.24	$ 9,885,355.28	$ 1,434,521.06	$148,942,289.14	100.00%
00.74%	6.64%	0.96%	100.00%	

(a). Includes [illegible] representing Federal [illegible] and Marshalltown [illegible] [illegible] in the amounts of [illegible] and [illegible] [illegible] [illegible]

(b) Includes Grand Plant in Toronto and South Africa proportion.

(c) [illegible]

Section 13

AUDIT OF COMMISSION'S ACCOUNTS

Our report entitled "Examination of Auditor's Reports for period 1916-1921 inclusive" deals exhaustively with this subject, and we direct particular attention thereto, as therein will be found a concise summary of outstanding features of the Commission's administration which have been brought out in the Annual Reports of the Auditor. We here confine our comments to the circumstances surrounding the appointment of a Special Auditor.

The intention of the Legislature, as expressed in the Act of 1906, was that the operations of the Commission should be carried on in a manner similar to that of a Government Department. All moneys received were directed to be paid into the Consolidated Revenue Fund of the Province, and the accounts of the Commission were subject to audit by the Provincial Auditor. No sums appear to have been paid by the Commission to the Province prior to 1916. The reports of the Provincial Auditor prior to 1916 contain references to the accounts of the Commission, but he does not appear to have ever made an audit of them. The correspondence between the Provincial Auditor and the Chairman of the Commission discloses great divergence of opinion and want of harmony between the two officials. In his report for the fiscal year, 1916, the Provincial Auditor characterizes the attitude of the Commission as one of "defiant disobedience" to the law and states that information required

Question 15

Extent of Commission's authority

The report entitled "Examination of Auditor's Reports for period 1919-1923 inclusive" deals exhaustively with this subject, and we direct particular attention thereto, as the work will be found a concise summary of outstanding features of the Commission's administration which have been brought out in the annual Reports of the Auditor. We have also filed our comments to the statements surrounding the appointment of a Special Auditor.

The intention of the Legislature, as expressed in the Act of 1921, was that the expenditure of the Commission should be carried on in a manner similar to that of a Government Department. All moneys received were directed to be paid into the Consolidated Revenue Fund of the Province, and the accounts of the Commission were subject to audit by the Provincial Auditor. No moneys appear to have been paid by the Commission to the Province prior to 1923. The reports of the Provincial Auditor prior to 1923 contain references to the accounts of the Commission, but no doubt appear to have been made on audit of them. The correspondence between the Provincial Auditor and the Chairman of the Commission disclosed some disagreeing of opinion and want of harmony between the two officials. In his report for the fiscal year 1922, the Provincial Auditor characterizes the "attitude of the Commission as one of "Ultra vires disregardness" to the law and states that Commission requires

by him has been withheld and it was found impossible to complete any audit or make any progress towards completeness. He further states that:

> "The Annual Statements rendered by the Commission to the Honourable the Provincial Treasurer for the years 1909 to 1915 inclusive, afford no actual accounting information and fail to disclose the existence of a large and rapidly increasing unauthorized expenditure in the years 1911 to 1915."

Honourable Mr. McGarry, then Provincial Treasurer, apparently held the opinion that there should be Provincial control over the expenditures of the Commission for he proposed the appointment by the Government of a Comptroller who would countersign all cheques of the Commission. This proposal assumed form in amendment to The Power Commission Act passed at the Session of 1916, which authorized the Lieutenant-Governor in Council to appoint a Comptroller. Effect was not given to this amendment to the Act, and at the Session of 1917, the suggested control over expenditures through the medium of an officer appointed by the Government and independent of the Commission was nullified by a further amendment to the Act passed in 1917, under which the Commission itself was authorized, with the approval of the Lieutenant-Governor in Council, to appoint a Comptroller. No such appointment has been made by the Commission.

In May, 1916, Mr. G. T. Clarkson, of the firm of Messrs. Clarkson, Gordon & Dilworth, Accountants, was directed to make an audit of the accounts of the Commission. His appointment as Auditor on behalf of the Government has been continued and Annual Reports have been furnished by him since 1918. Mr. Clarkson began his audit in July, 1916, and his draft report was completed in

by him has been validated and it was found impossible to complete any audit or make any proper fiscal adjustments. The Summer states that,

> "The annual statements prepared by the Commission to the Superintendent of Treasury for the years 1940 to 1942 inclusive, effect no actual accounting information and fail to disclose the existence of a large and regularly increasing unauthorized expenditure in the years 1941 to 1942."

Concerning Mr. Hickey, then Provincial Treasurer, specifically held the opinion that there should be Provincial control over the expenditures of the Commission for he proposed the appointment by the Government of a Comptroller who would immediately all disbursements. This proposal seemed from in accordance to the Home Commission Act passed at the Session of 1941, which authorized the Lieutenant-Governor in Council to appoint a Comptroller. Either was the proper authority in the Act, but at the Session of 1942, the suggested method was expenditures through the medium of an officer appointed by the Government and independent of the Commission was utilized by a further amendment to the Act passed in 1942, under which the Commission itself was authorized, with the approval of the Lieutenant-Governor in Council, to appoint a Comptroller. No such appointment has been made by the Commission.

In May, 1944, Mr. S. E. Stevens, of the firm of Messrs. Stevens, Burton & Milnerd, Accountants, was directed to make an audit of the records of the Commission. His appointment as auditor on behalf of the Government has been mentioned and annual reports have been furnished by his since 1941. Mr. Stevens began his audit in July, 1941, and his first report was completed in

February, 1918, and covered the entire period from the appointment of the Commission in 1906 to October 31st, 1916.

In the report of the Commission for the year ending October 31st, 1919, it is stated that Mr. Clarkson's report for the period from 1906 to 1916 was duly presented to the Treasurer of Ontario. This statement is misleading. The report of Mr. Clarkson covering the period mentioned was drafted and in February, 1918, discussed with the Provincial Treasurer, but was never formally presented and never published. In explanation of the circumstances surrounding this draft report, we were informed by Mr. Clarkson that the report was a series of criticisms of the Commission for overstepping authority in one direction or another and that it was thought best before presenting a report that amendments be made to The Power Commission Act legalizing the actions which had been taken by the Commission without authority. With the aid of Mr. Clarkson and the concurrence of the Provincial Treasurer, amendments to the Act were drafted. These were passed at the Session of the Legislature of 1918, and later in the year Mr. Clarkson presented his report for the period ending October 31st, 1917. Mr. Clarkson has stated:

> "I have a very definite idea in my mind as to the way accounts should be modelled and should be carried down to display the actual progress of the Commission. I put the accounts into that shape and then modelled the legislation to follow it ... In presenting that account to October 31st, (1917) it was completely modelled on the legislation which went through in April 1918 ... That is the position with regard to that 1916 report, which was not reported until 1918, because it was thoughtdesirable to bring it into line with that legislation ... In other words we moulded the accounts to the shape they ought to take."

See P55

February, 1914, and covered the entire period from the appointment of the Commission in 1908 to October 31st, 1913.

In the report of the Commission for the year ending October 31st, 1912, it is stated that Mr. Ellerman's report for the period from 1908 to 1912 was duly presented to the Commission of Inquiry. This statement is misleading. The report of Mr. Ellerman covering the period mentioned was started and in January, 1913, discussed with the Commission, but was never formally presented nor never published. In explanation of the statement accompanying this draft report, we were informed by Mr. Ellerman that the report was a mixed up collection of activities of the Commission for investigating matters in one direction or another, and that it was thought best before presenting a report that commission be made to the Prime Ministers and legislatures of the three Dominions and legislation taken that had been taken by the Commission without authority. With the aid of Mr. Ellerman the commission of the Provincial Premiers, commission to the full was drafted. These were placed in the Session of the Legislature of 1914, but later in the year Mr. Ellerman presented his report for the period ending October 31st, 1913. Mr. Ellerman has stated:

> "I have a very definite idea in my mind as to the way commission should be modified and should be carried down to slightly the actual practice of the Commission. I put the suggestion into that shape but then modified the legislation to follow it ... In presenting that account to October 31st, 1913, I was deliberately violated on the legislation which was drawn in April 1913 ... That is the position with regard to that 1913 report, which was not reported until 1914, because it was strategically to bring it into line with that legislation ... In other words to develop the commission in the shape they want it then."

This was certainly a most effective, if unusual, course of action. The accounts not conforming with the Statutes, the Statutes were made to conform with the accounts. "The overstepping of authorities in one direction or another", criticized by Mr. Clarkson was apparently not brought to the attention of the Legislature or the public. Mr. Clarkson has furnished us with a copy of his draft report upon accounts of the Commission to 1916 and we find that it exhibits a condition of affairs vastly different from that indicated in the first published report. A perusal of this and other reports of Mr. Clarkson, including the last one published, shows conclusively that the Commission has continually disregarded statutory restraints and has apparently deemed itself even free from the obligations to employ funds entrusted to it for specific purposes for those purposes alone. Breaches of Statutes and unauthorized courses of action have so frequently been condoned and ratified by subsequent legislation, and the law has been so often changed to validate the wrongful act or to declare that no fault has been committed, that these wrongful practices on the part of the Commission became habitual.

Bills was certainly a most effective, if unusual, method of action. The measures not conflicting with the Statutes, the Statutes were made to conform with the measures. "The overstepping of authorities in the direction or manner", criticized by Mr. Clarence was apparently not treated as the attention of the Legislature or the public. Mr. Clarence has concluded as with a copy of his draft report upon measures of the Commission to Will and he find that it exhibits a condition of affairs vastly different from that indicated in the first published report. A perusal of this and other reports of Mr. Clarence, including the last and published, shows conclusively that the Commission has continually disregarded statutory authority and has apparently labored hard even from the obligations to comply than entered on it for specific authority for these purposes alone. Instead of Statutes had substituted matters of action have so frequently been conceived and matters by unfounded judgments, and the law has been at stake, in validity the wrongful act or to declare that no Bills has been enactment, that these wrongful practices on the part of the Commission have lasted.

PART V - POWER AT COST

Section 14

DEFINITION OF TERM "POWER AT COST"

It is provided in Section 23 of The Power Commission Act that in addition to the price per horse-power payable by any municipal corporation under the terms of a contract entered into with the Commission, which shall be the cost of the power to the Commission at the point of development or of its delivery to the Commission, the corporation shall annually pay to the Commission its proportion as adjusted by the Commission of:

(a) Interest at four per cent. per annum upon capital expenditure and working capital.

(b) Annual sums sufficient with interest at four per cent. to form in thirty years a sinking fund for the repayment of advances made by Ontario for payment of the cost of the works, and

(c) Other charges, including line loss, cost of operating, supervising, maintaining, repairing, renewing and insuring the works, remuneration of members of the Commission, appropriations for establishment and support of any fund for superannuation and retiring allowances and sick benefits, to permanent employees of the Commission and such sum as the Lieutenant-Governor in Council may direct to cover the difference between the four per cent. charged on money expended on capital account, advances for working capital and all charges and expenses of providing such money.

"Power at cost", accordingly, may be defined to be power at such a price per horse-power per annum as represents the cost of such power to the Commission at the point of development or delivery, plus

PART I - RIGHTS AT CORE

Section 15

Conditions of some "Power at Cost"

It is provided in Section 15 of the Power Commission Act that in addition to the rates per horse-power payable by any municipal corporation under the terms of a contract entered into with the Commission, which shall be the cost of the power to the Commission at the point of development or of its delivery to the Commission, the corporation shall annually pay to the Commission its proportion as adjusted by the Commission of:

(a) Interest at four per cent. per annum upon capital expenditure and another capital;

(b) Annual sum equivalent with interest at four per cent., to pay in thirty years a sinking fund for the repayment of advances made by Commission for payment of the cost of the works, and

(c) Other charges, including item 1(a), (b) or (c) above, operating, maintenance, repairing, renewing and insuring the works, remuneration of members of the Commission, depreciation on permanent improvements, reserve for bad debts and contingencies and replacement allowances and also sinking, or payment equivalent of the Commission and such sum as the Lieutenant-Governor in Council may direct to cover the difference between the four per cent. charges on money expended on capital account, whenever the working capital and all charges and expenses of providing such money.

"Power at cost", nevertheless, may be defined to be power at such a price per horse-power per annum as represents the cost of such power to the Commission at the point of development or delivery, plus

annual payments, apportioned and adjusted by the Commission, of the customer's proportion of fixed and other charges required to be paid by Section 23 of The Power Commission Act.

The policy of the Legislature as expressed in The Power Commission Act when originally enacted and throughout its development and various amendments, appears clearly to have been to provide to each contracting municipal corporation power at a cost comprising the same elements. The cost is determined and fixed in the same way in the case of all groups of contracting municipal corporations.

It is quite evident that conditions prevailing in respect of works from which power is supplied to the different groups of municipal corporations or "Systems", as defined by the Act must differ, so that "cost" cannot be the same to each. Thus the several corporations comprising one "System" may be required to pay an annual price per horse-power for power greatly in excess of or less than that payable by those in another system.

An ideal situation, if practicable, would be created, if "cost" of power were the same in all parts of the Province, so that a publicly-owned and operated public utility would be available to each and every municipality of the Province on precisely the same basis, and industrial progress in one locality not handicapped by higher rates for power than prevail in others. It is contended by some that the water-power resources of the Province, the common heritage of all the inhabitants thereof, should be administered in such a way that all would equally benefit, and that power

annual payments, approximated and adjusted by the Commission, of the purchaser's proportion of fixed and other charges required to be paid by section 43 of the Power Commission Act.

The policy of the Legislature as expressed in the Power Commission Act when originally enacted and throughout its development and various amendments, appears clearly to have been to provide in such manner, including municipal appropriation power as a sort counterpoise the main element. The sort is determined and fixed in the case only in the case of all groups of municipalities appropriations.

It is quite evident that municipalities generally in respect of water from public power is required to the different groups of municipal corporations or "Systems", as defined by the Act mentioned, so that "part" cannot be the same as each. Thus the general appropriation application was "system" may be required to pay on annual price per horsepower the power partly in excess of or less than that payable by those in another system.

An ideal situation, if practicable, would be created, if "some" of power were the same in all parts of the province, so that a municipality-owned and operated public utility would be available in each and every municipality of the Province on precisely the same basis, and industrial property in one locality not handicapped by higher rates for power than prevail in others. It is maintained by some that the water-power resources of the Province, the common heritage of all the inhabitants thereof, should be administered in such a way that all would equally benefit, and that power

produced therefrom should be distributed to all parts of the Province "at cost", such cost being arrived at by combining all the several undertakings, now conducted in reality as distinct and separate businesses although under the same administration, into one general business or undertaking in which all works, resources and revenues would be pooled and each contracting municipal corporation receive power at the same price. There are many practical difficulties in the way of adopting such a system and there are wide differences of opinion upon it among the public generally and among ourselves. Later in the report we state some of the views pro and con which have been submitted to us.

The question as to whether discrimination and unfairness do now exist in respect of fixed charges especially when the total cost of power in the several systems is compared, will hereinafter be discussed. Variations in total costs is illustrated by the following table of average cost per horsepower for the year ending October 31st, 1922, to nine "Systems":

Niagara	26.37	St. Lawrence	41.32
Severn	30.27	Rideau	36.20
Eugenia	42.16	# Thunder Bay	25.00
Wasdell's	44.20	Ottawa	14.00
Muskoka	22.09		

- Flat rate charged, only about $20.00 being paid.

That the same basis and methods are not employed in arriving at cost in all cases is indicated in our report, "History and General Relations" and in a measure in the succeeding sections of this report, which deal with "Interest Charges", "Sinking Funds", "Renewal Rates", "Contingencies", and other overhead charges.

produced Everytown should be distributed to all parts of the Service "as need", each year being arrived at by analyzing all the several subscriptions, now produced in reality as distinct and separate businesses although under the same administration, into one general business by substituting in which all terms, restrictions and provisions would be pooled and each subscribing municipal corporation receive power at the same price. There are many practical difficulties in the way of adopting such a system and there are also difficulties of opinion such as among the public generally and among subscribers. Labor in the repair or state some of the risks you and you will have been subjected to us.

The question as to whether distribution and maintenance in our order in respect of flood damage especially when the total cost of power in the several systems is adequate, will hardly be in dispute. Publication in total costs is illustrated by the following table of revenue and per kilowatt power for the year ending October 31st, 1931, in nine "systems".

Tuscaloo	22.27	St. Lawrence	21.22
Bayton	20.37	Elkhom	16.23
Rogers	21.12	Y Valley Dep	22.17
Hawkil's	16.23	Tetons	24.21
Tuscaro	22.12		

* - Flat rate charged, only about $17.21 being paid.

Just the same basis and methods are not employed in arriving at what is all made in Exhibits in our report, "Sinking and Renewal Activities" and in a minute in the accounting methods of this report, which deal with "Interest Charges", "Sinking Funds", "Renewal Dates", "Depreciation", and other overhead charges.

Section 15

INTEREST CHARGES

A detailed discussion of the subject of interest charges and the effect of amendments made to The Power Commission Act relating to interest payable by the Commission to the Province and by municipal corporations to the Commission are to be found in our report, "Cost of Money Advanced to the Hydro-Electric Power Commission by the Province of Ontario". That report also shows the effect of the cost of money, forming as it does the most important regulating factor upon the cost of power.

The increased cost of money as shown by the enhanced rate of interest payable by borrowers since 1914, naturally changed conditions respecting Provincial advances to the Commission, demands for which became more insistent and for increasing amounts. The original Power Commission Act was based on the assumption that an annual rate of four per cent. was adequate to recoup the Province the cost of money advanced by it to the Commission. For determining the cost of power payable by municipal corporations, interest charges on capital expenditures for works were fixed by the Act at four per cent. per annum. In 1915 the Legislature provided by amendment to the Act that municipal corporations should pay to the Commission in addition to four per cent., the difference between that rate and the actual cost of providing the money required for payment of the cost of works. Prior to that date and until 1918 the amounts collected by the Commission from municipal corporations and others were payable by the Commission to the Province, the latter thus supposedly being re-imbursed the cost to it of money advanced to

Section 18

INTEREST DEBTS

A detailed discussion of the subject of interest charges and the effect of commitments made to the Power Commission not relating to interest payable by the Commission to the Province and by municipal corporations to the Commission are to be found in our report, "Cost of Money Advanced to the Hydro-Electric Power Commission by the Province of Ontario". That report also shows the effect of the cost of money, treating as it does the most important fluctuating factor upon the cost of power.

The increased cost of money as shown by the minimum rate of interest payable by municipalities, actually assumed conditions regarding financial advances to the Commission, demands for which became more insistent and for increasing amounts. The original Power Commission Act was based on the assumption that an annual rate of four per cent. was adequate to recoup the Province the cost of money advanced by it to the Commission. For determining the cost of power supplied by municipal corporations, interest charges on capital expenditures for years were fixed by the Act at four per cent. per annum. In 1913 the Legislature provided by amendment to the Act that municipal corporations should pay to the Commission in addition to four per cent., the difference between that rate and the actual cost of providing the money required for payment of the cost of works. Prior to that date and until 1913 the amounts collected by the Commission from municipal corporations and others were payable by the Commission to the Province, the latter thus apparently being re-imbursed the cost to it of money advanced to

the Commission for capital expenditures. Under the amendment of 1915 the difference between four per cent. and the actual cost of money payable by municipal corporations was required to be determined by the Lieutenant-Governor in Council, but it was not until 1917 that an Order-in-Council was passed so determining this difference and then only for the then current fiscal year. In 1918, a radical change was made in the relationship between the Province and the Commission by further amendment to the Act under which the Commission was required to pay to the Province annually the cost of money to the Province as fixed by the Lieutenant-Governor in Council. It was presumably, but not expressly, provided that an Order-in-Council fixing the amount should be passed each year. The policy of the Act in respect of the payment of interest by municipal corporations to the Commission and by the Commission to the Province has never been strictly complied with since the amendments mentioned were enacted. When a fixed rate of four per cent. prevailed, the Province simply billed the Commission with interest at that rate upon advances, and the Commission included in the power bills rendered to municipal corporations an item representing their proportion of interest at the same rate upon capital expenditures made upon the works serving them. So long as the cost of money to the Province, and, therefore, to the Commission, did not exceed four per cent. per annum, each was fully re-imbursed its payments on account of interest. The same method of billing for interest was, however, continued after the amendments, and accounts were rendered by

the Commission for capital expenditure. Under the management of Sir Ion Hitchcock between four per cent. and the normal rate of twenty pounds by municipal corporations was required to be determined by the Government in Council, but it was not until 1917 that an Order-in-Council was passed on substantially this difference and then only for the then current fiscal year. In 1919, a radical change was made in the relationship between the Province and the municipalities by further amendment to the act under which the Commission was required to pay to the Province annually the sum of money to the Province as fixed by the Lieutenant-Governor in Council. It was provisionally, but not officially, provided that on Order-in-Council fixing the amount should be passed each year. The policy of the act in regard to the payment of interest by municipal corporations to the Commission and by the Commission to the Province has never been strictly complied with since the constitutional machinery was changed. Then a final rule of four per cent. prevailed, the Province simply billed the Commission with interest at that rate upon advances, and the Commission included in the power bills rendered to municipal corporations an item representing their proportion of interest. At the end four per cent. applied regardless such sum for which payment had to be made in the year of money in the Province, and, therefore, to the Commission, did not exceed four per cent. Now however, that the Hydro-Electric is provide on account of interest. The same method of billing for interest was however, continued after the commission, and accounts were rendered by

the Province to the Commission and by the Commission to municipal corporations at rates not determined in accordance with the Act but at such rates as were considered by the Department of the Provincial Treasurer to be the average cost of money to the Province during the year. We were informed that in arriving at the rate to be charged an official of the Treasury Department, after making his calculations, discussed the matter with a representative of the Commission. In the result, as shown in our report previously mentioned, the cost to the Province of moneys advanced for purposes of the Commission, and consequently the amount properly receivable by the Commission from municipal corporations, has exceeded the amount received by the Province for interest by a sum of from $250,463.49 to $643,271.46 according to the basis of calculation adopted. The desirability of a strict compliance with the Act, and the further desirability that the rate of interest to be paid each year by the Commission to the Province, and, therefore, by municipal corporations to the Commission, should be checked and approved by the Government Auditor of the Commission's accounts, is self-evident.

As between "Systems", the only case of discrimination by the Commission in interest rates charged by it as part of the cost of power was that mentioned in previous reports namely that for the period from 1918 to 1921, during which the prevailing interest rate was over six per cent. per annum, the Commission computed interest on expenditures in connection with the Nipigon Development for the Thunder Bay System at the rate of five per

the Province to the Commission and by the Commission to municipal corporations at rates not determined in accordance with the cost of such rates as were established by the Department of the Provincial Treasurer to be the average cost of money to the Province during the year. We were informed that in arriving at the rate to be charged an official of the Treasury Department, after making his calculations, discussed the matter with a representative of the Commission. In the result, as shown in our report previously mentioned, the cost to the Province of money advances for purposes of the Commission, and consequently the amount properly receivable by the Commission from municipal corporations, has amounted the amount received by the Province for interest by a sum of from $1,000,624.40 to $944,171.48 according to the basis of calculation adopted. The desirability of a strict compliance with the Act, and the further desirability that the rate of interest to be paid each year by the Commission to the Province, and, therefore, by municipal corporations to the Commission, should be assessed and approved by the Government Auditor of the Commission's accounts, is self-evident.

As between "systems", the only case of discontinuation by the Commission in interest rates charged by it on part of the cost of power was that mentioned in previous reports namely that for the period from 1916 to 1921, during which the prevailing interest rate was over six per cent. per annum, the Commission computed interest on expenditures in connection with the Niagara Development for the Toronto Hydro System at the rate of five per

cent., and proposed paying the same rate to the Province in respect of its advances therefor. This meant a loss to the Province and gain to the System of over $71,000.00. The action of the Commission was not endorsed by the Government, and the Commission recently has charged on its books against the System an amount for interest which places it on a parity with other systems. The attention of Your Honour was drawn in our "Interim Report, Thunder Bay System" to the further fact that although the municipal corporation of Port Arthur has been so charged with interest as part of the cost of power payable by it, the corporation has continuously refused to pay for its power "at cost", and up to October 31st, 1923, the expenses in connection with supplying power to said municipality exceeded revenues received by more than $500,000 and interest remained unpaid to the Province in connection with its advances for this undertaking by an amount exceeding $565,000.

The works which supply power to some of the systems were constructed and the advances for the cost thereof made by the Province, prior to October 31st, 1914. As under the Act interest on such advances is computed at the rate of four per cent., while interest on advances made since that date is computed at rates greater than four per cent. and since interest charges form, as they do, a large factor in determining the total "Cost of Power", it is clear that "power at cost" means power at a lower cost, when supplied from works constructed prior to 1914 than from works constructed since 1914.

tent, and proposed paying the same rate to the Province in respect of its advances thereafter. This meant a loss to the Province and gain to the System of over $71,000.00. The action of the Commission was not endorsed by the Government, and the Commission recently has charged on its books against the System an amount for interest which plays it on a parity with other systems. The attention of Your Honour was drawn in our "Electric Report, Chapter Two" to the further fact that although the municipal corporations at Port Arthur has been so charged with interest on part of the cost of power payable by it, the corporation has continuously refused to pay for its power "at cost", and up to October 31st, 1944, the expense in connection with supplying power to said municipality exceeded revenue received by more than $200,000 and interest remained unpaid by the Province in connection with its advances for this undertaking by an amount exceeding $400,000.

The more rural supply power to some of the systems were constructed and the advances for the most thereof made by the Province, prior to October 31st, 1914. As under the Act interest on such advances is computed at the rate of four per cent, while interest on advances made since that date is computed at rates greater than four per cent. And since interest charges form, as they do, a large factor in determining the total "Cost of Power", it is clear that "power at cost" means power at a lower cost, when supplied from works constructed prior to 1914 than from very electrified areas like

The amount payable annually by municipal corporations on interest account being the chief factor in determining the annual cost of power, the importance of avoiding extravagant capital expenditures upon works upon which interest is payable annually will also be recognized. Further comment on the subject of fixed charges as part of the cost of power will be found in succeeding sections hereof.

Section 16

SINKING FUNDS

In the administration of the affairs of the Commission, the establishment of sinking funds for the repayment of Provincial advances and retirement of other obligations assumed by the Commission and the Province in connection with the construction and acquisition of works is of prime importance. The subject has received attention in our reports already submitted to Your Honour and the salient features are here summarized and attention drawn to existing anomalies arising from the interpretation placed upon Statutory Provisions. The Legislature evidently had two objects when making provision in The Power Commission Act for the accumulation of a fund in respect of each of the undertakings operated by the Commission which, in a defined period, would be equal to the total capital cost of the undertaking. In the first place, the Province as the banker supplying the moneys for capital expenditures, in addition to receiving interest upon its advances, was to be repaid these; or there were to be deposited with the Treasurer, Provincial securities pur-

The amount payable annually by municipal corporations on interest account being the chief factor in determining the annual cost of power, the importance of avoiding extravagant capital expenditure upon works upon which interest is payable annually will also be recognized. Information on the subject of flood storage as part of the cost of power will be found in succeeding sections hereof.

Section 14

SINKING FUND

In the administration of the affairs of the Commission, the establishment of sinking funds for the repayment of financial advances and retirement of other obligations, by the Commission and the Province in connection with the construction and acquisition of works is of prime importance. The subject has received attention in our reports already submitted to Your Honour and the various functions are here summarized and attention drawn to existing anomalies arising from the interpretation placed upon statutory provisions. The legislature evidently had two objects when making provision in the Power Commission Act for the accumulation of a fund in respect of each of the undertakings operated by the Commission which, in a definite period, would be equal to the total capital cost of the undertaking. In the first place, the Province as the banker supplying the moneys for capital expenditure, in addition to receiving interest upon its advances, was to be repaid issues, or there were to be deposited with the Treasurer, provincial securities par-

chased by the Commission with sums paid by municipal corporations and others, these securities to be held by the Province as security for its advances made and obligations assumed. In the second place, the repayment of the advances of the Province and release of obligations assumed by it were intended to divest the Province of a proprietary interest in the works and properties held by the Commission and the beneficial ownership thereof was to revert to municipal corporations in proportion to the amounts, with accumulations, paid by them on sinking fund account.

Only in respect of advances by the Province for the cost of works serving municipal corporations under contract with the Commission, do the Statutes relating to the supply of electrical power or energy make definite provision as to the basis upon which sinking fund payments shall be made. The Power Commission Act, however, does definitely provide that all sums received by the Commission from municipal corporations and others shall be invested in Provincial securities and these delivered to the Treasurer of the Province. Sinking fund accounts have been opened by the Commission in respect of undertakings, the cost of which has been met otherwise than by the employment of advances by the Province, and the amounts credited to these accounts are held by the Commission and not treated in the same manner as are the payments received on account of Provincial advances. We are advised that this position of the Commission is unjustifiable, and that these funds should likewise be invested in Provincial securities and delivered to the Provincial Treasurer.

shared by the Commission with such paid or municipal corporations and others, these securities to be held by the Province as security for the advances made and obligations assumed. In the second place, the repayment of the advances of the Province and rights of obligations assumed by it were intended to secure the Province of a proprietary interest in the works and properties held by the Municipalities and the beneficial ownership thereof was to revert to municipal corporations in proportion by the amounts, with accumulations, paid by them on sinking fund account.

Only in respect of advances by the Province for the cost of works serving municipal corporations under contract with the Commission, is the figures relating to the supply of electrical power or energy made definite provision as to the basis upon which sinking fund payments shall be made. The Power Commission has, however, been sufficiently provide that all sums received by the Commission from municipal corporations and others shall be invested in Provincial securities and the interest of the Province. Similar fund accounts have been opened by the Commission in respect of contracts, the most of which has been not otherwise than by the assignment of advances by the Province, and the amounts credited to these accounts are held by the Commission and are treated in the same manner as the payments received on account of Provincial advances. We are advised that this position of the Commission is unquestionable, and that these funds should likewise be invested in Provincial securities and delivered to the Provincial Treasurer.

In respect of certain undertakings no sinking funds have been established for the retirement of certain assumed bonded indebtedness and the liability of the Province for this indebtedness will continue for indefinite renewal periods. The policy of The Power Commission Act undoubtedly was that all municipal corporations entering into contracts with the Commission for supplies of "power at cost", would, as part of the "cost" of power, pay annual sums sufficient to form in thirty years a sinking fund for repayment of the advances by the Province in respect of the cost of the works. The same basis for accumulation of sinking funds being applicable to all, municipal corporations are all presumably on an equal footing as to that part of the cost of power attributable to payments on account of sinking funds. Amendments to the Act having undoubtedly for their object the relief of municipal corporations during the first five years in which they make payments for power, and the giving to such municipalities of an opportunity to build up their power loads before being called upon to pay their proportion of sinking funds, have been interpreted and applied by the Commission not only to the deferment of the time for payments on account of sinking fund in the case of all municipal corporations for a period of five years from the date on which payments for power supplied them commence, but also have been held by virtue of the interpretation placed by the Commission upon The Ontario Niagara Development Act, 1917, to apply to the cost of the Queenston-Chippawa Development, which, in effect, is an extension to the works of the Niagara System, and repayment of which cost it is proposed to defer for a period of five years from the time at which the plant was put in operation. This, in our opinion, goes far beyond the clear intention of the Legislature as expressed in the Act.

See also P 68

In regard of certain materialmen in placing funds have been established for the retirement of certain assumed bonded indebtedness and the liability of the trustees for this indebtedness will continue for indefinite numerical periods. The policy of the Power Commission act undoubtedly was that all municipal corporations entering into contracts with the Commission for supplies of "power at cost", would, as part of the "cost" of power, pay annual sum sufficient to form in thirty years a sinking fund for repayment of the advances by the Province in respect of the cost of the works. The same basis for accumulation of sinking funds being applicable to all, municipal corporations are all practically on an equal footing in so that part of the cost of power attributable to payments on account of sinking funds. Immediate to the Commission for their object the relief of municipal corporations during the first five years in which they made payments for power, and the giving to such municipalities of an opportunity to build up their power funds before being called upon to pay their proportion of sinking funds, have been interpreted and applied by the Commission. Our only is the determination of the time for payments on account of sinking fund in the case of all municipal corporations for a period of five years from the date on which payments for power supplied from commence, but also have been held by virtue of the interpretation placed by the Commission upon the Ontario Finance Development act, 1917, to apply to the end of the Commission-Ontario Development, which, in effect, is an extension to the works of the Niagara System, and repayment of which cost it is proposed to defer for a period of five years from the time at which the plant was put in operation. This, in our opinion, goes far beyond the clear intention of the legislature as expressed in the act.

The intention of the Legislature in establishing a five-year deferment period was apparently to help those systems, where the demand for power might be light, over the five years following construction so that they might not have to pay what might be prohibitive prices for power during that period. But the Commission has adopted the practice of granting the extension not only where the demand is light but in those systems where the whole of the power generated is disposed of from the beginning, thus, in effect, extending the general sinking fund period from thirty to thirty-five years. The necessity for a uniform clearly-defined procedure in respect of all sinking funds for repayment of moneys expended or obligations assumed for construction or acquisition of power undertakings of the Commission is apparent.

Special legislation affecting the works of the Thunder Bay System, established a basis different from that relating to other works for accumulation of a sinking fund, the period being forty instead of thirty years. The Commission applied the provision for a five-year deferment in this case also and in effect established a sinking fund for the Thunder Bay System on a forty-five year basis, authority to do which seems doubtful.

The Ontario Niagara Development Acts, under which the Queenston-Chippawa Power Development was constructed, and to which The Power Commission Act, except where specifically made applicable, does not apply, contain

The intention of the Legislature in establishing a five-year deferred period was apparently to help those systems, where the amount for power might be light, over the five years following construction as the only might have to pay most might be prohibitive prices for power during that period. But the Commission has adopted the practice of granting the extension but only where the demand in fact has in those systems where the whole of the power required is diverted to from the Commission, that, in effect, extending the general deferred period from thirty to thirty-five years. The necessity for a uniform charity-rating procedure is evident if all sharing funds for assignment of source expected or obligations assumed for extension or acquisition of power undertakings of the Commission is approved.

Special legislation affecting the towns of the Thunder Bay System, established a basis different from that relating to other towns for consolidation of a sinking fund, the period being forty instead of thirty years. The Commission applied the provision for a five-year deferment in this case also and in effect established a sinking fund for the Thunder Bay System as a forty-five year basis, authority to do which never existed.

The Ontario Hydro-Development Act, under which the Commission Chippewa Power Development was constructed, and in which the Power Commission act, except where specifically made applicable, does not apply, contains

provision for payment, as part of the cost of power payable by municipal corporations contracting for power to be supplied from Niagara plants, of sums on account of sinking fund for repayment of the cost of that Development. The original estimates of the Commission of the cost of power generated at the Queenston-Chippawa plant included payments on sinking fund account on a thirty-year accumulation basis. The Commission has since interpreted Section 5 of The Ontario Niagara Development Act, 1917, as authorising it to establish a sinking fund in respect of the works constructed or acquired pursuant to the Act on such basis as it may deem necessary and proper, and in estimates submitted to us has adopted the basis of payments on account of sinking fund extending over a period of forty years, commencing after five years from the date of expenditures.

The adoption of diverse bases for the establishment and accumulation of sinking funds has resulted not only in causing inequalities and discrimination in annual power rates payable by municipal corporations, but it has also extended the time originally contemplated within which the Province will be repaid its advances and relieved of its obligations and municipal corporations acquire a full proprietary interest or ownership of the works constructed and acquired on their behalf. The extension of sinking fund period in the case of the Queenston-Chippawa Power Development to forty-five years and the procedure adopted in respect of sinking funds for The Ontario Power Company and The Toronto Power Company, has a

provision for payment, as part of the cost of power payable by municipal corporations contracting for power to be supplied from Niagara plants, of such an amount of sinking fund for repayment of the cost of that development. The original estimates of the Commission of the cost of power generated at the Queenston-Chippewa plant included payments on sinking fund account on a thirty-year accumulation basis. The Commission has since interpreted section 5 of the Ontario Power Development Act, 1917, as authorizing it to establish a sinking fund in respect of the works constructed or acquired pursuant to the Act on such basis as it may deem necessary and proper, and in estimates submitted to us has adopted the basis of payment on account of sinking fund extending over a period of forty years, commencing after five years from the date of completion.

The adoption of diverse bases for the establishment and accumulation of sinking funds has resulted not only in serious inequalities and discriminations in annual power rates payable by municipal corporations, but it has also extended the time originally contemplated within which the Province will be repaid its advances and relieved of its obligations and municipal corporations acquire a full proprietary interest or ownership of the works constructed and acquired on their behalf. The extension of sinking fund period in the case of the Queenston-Chippewa Power Development to forty-five years and the premature adoption in respect of sinking funds for the Ontario Power Company and the Niagara Power Company, has a

very material effect upon the annual cost of power to the corporations in the Niagara System. With the Niagara plants controlled by the Commission operating at full capacity and the full amount of power generated being consumed, the total amount paid annually for power by municipal corporations of the Niagara System will be, it has been calculated by our Accountants, at least $800,000 less than if sinking fund payments were made on a thirty-year basis. Extensions and improvements doubtless will be made to these plants and the time when the municipalities interested may expect to acquire complete ownership is receding into the dim future. In the meantime the municipal corporations in the Niagara System are not only benefitting by their favoured location in proximity to the greatest water power of the Province, but they are additionally favoured by discrimination in sinking fund rates.

The total amount of the credit of sinking fund accounts on the books of the Commission on October 31st, 1922, was $2,677,947.09; cash advances and guarantees of the Province and other bonds as of the same date totalled $150,946,112.59; the proportion the one amount bears to the other represents the relative interest of the municipalities and the Province in the ownership of works controlled and operated by the Commission under the provisions of The Power Commission Act and The Ontario Niagara Development Acts.

The belief has been engendered and kept alive in many minds that municipal corporations will acquire complete ownership of the undertakings of the Commission in thirty years and in the meantime are the real owners subject only to payment of certain indebtedness to the Province. There is no foundation for such belief, but it is refreshed from time to time by utterances of enthusiasts. As recently as December 12th, 1923, a newspaper report quotes Sir Adam Beck as saying:

> "Under our present system we have provided for the retirement of the debt on capital investment at the end of thirty years."

By way of example, and having regard to the fact that the capital investment in Niagara plants amounts to over 80% of the total capital investment in all the power undertakings of the Commission, out of a total of $134,000,000, of which but $25,233,528, or about 19% is being provided for by a sinking fund on a thirty-year basis, it is clear that the statement just quoted is untrue.

Section 17

RENEWAL RATES

The accumulation of reserves to cover depreciation of properties is deemed expedient and necessary in all well-regulated enterprises, especially where the use of the properties entails considerable depreciation in values. The Commission, having been authorized to establish renewal reserves, and to add the amounts appropriated therefor to the cost of power to

The belief has been manifested and may arise in many minds that municipal corporations will acquire complete ownership of the undertakings of the Commission in thirty years and in the meantime are the real owners subject only to payment of certain indebtedness to the Province. There is no foundation for such belief, but it is referred from time to time by statements of politicians. In promoting an Ontario City, 1920, a newspaper report quotes Sir John Gan as saying:

"Under our present system we have provided for the repayment of the debt on capital investment at the end of thirty years."

By way of example, and having regard to the fact that the capital investment in Niagara plants amounts to over 80% of the total capital investment in all the undertakings of the Commission, out of a total of $124,000,000, or which $20,000,000, or about 16% is being provided for by a sinking fund on a thirty-year basis, it is clear that the statement just quoted is unsound.

COPY

Question IV

Amortization

The accumulation of reserves to cover depreciation of properties is deemed expedient and necessary in all well-regulated enterprises, especially where the use of the properties entails considerable depreciation in values. The Commission, having been authorized to establish renewal reserves, and to add the amounts appropriated thereto to the cost of power to

municipal corporations, after communicating with the management of large public utilities on the Continent, adopted renewal rates, which, with few exceptions, were continued to October 31st, 1921. These rates were necessarily variable as applied to different classes of property, but were based upon a general policy of expending sufficient to maintain each and every portion of the undertakings in a condition to operate economically. The plan adopted was to maintain the works 75% as good as new. The rates established by the Commission were based on the prospective life of the several component parts of the properties, some of which extend to one hundred years, but did not take into consideration the possibility of obsolescence of plant through development of electrical science. The renewal rates in force at the time of our appointment as Commissioners were the subject of investigation by our Consulting Engineer and he reported thereon to us.

In 1922, moved no doubt by a desire to lower the annual cost of power, which was steadily increasing and occasioning complaints, and to wipe out arrears due by municipalities, the Commission took into consideration the advisability of revising and reducing the renewal rates then in effect. As appears by the Minutes of a meeting of the Commission held on November 22nd, 1922:

> "The report of the Chief Engineer re depreciation rate on the Eugenia System was considered, and the matter was deferred in order that the Chief Engineer may place the full facts before Messrs. R. A. Ross and W. J. Francis, so as to get their opinions covering the recommendation made."

municipal corporations, after consulting with the management of large public utilities on the continent, adopted several rates, inter, with the exceptions, were maintained to October 31st, 1921. These rates were necessarily variable as applied to different classes of property, but were based upon a general policy of expending sufficient to maintain each and every portion of the undertaking in a condition to operate economically. The plan adopted was to maintain the works 75% as good as new. The rates established by the Commission were based on the prospective life of the several component parts of the properties, some of which extend to one hundred years, but did not take into consideration the possibility of obsolescence of plant through development of electrical science. The renewal rates in force at the time of the application as Commissioners were the subject of investigation by our Consulting Engineer and he reported thereon to us.

In 1921, moved no doubt by a desire to lower the annual cost of power, which was steadily increasing and embarrassing municipalities, and to wipe out arrears due by municipalities, the Commission took into consideration the advisability of revising and reducing the renewal rates then in effect. As appears by the Minutes of a meeting of the Commission held on November 22nd, 1921:

> "The report of the Chief Engineer re depreciation rate on the Niagara System was considered, and the matter was referred in order that the Chief Engineer may place the full facts before Messrs. H. G. Dwyer and W. J. Kennedy, so as to get their opinions covering the recommendations made."

Mr. R. A. Ross is one of our number and Mr. W. J. Francis is our Consulting Engineer.

On December 20th, 1922, the subject again came before the Commission as appears by the Minutes of a meeting of that date, from which we quote:

> "The Chief Engineer having recommended a revised depreciation rate, calculated on the basis of the life of the equipment, also having advised that this matter had been taken up with Mr. Francis, and approved, it was decided that the depreciation rate for the Eugenia System should be fixed at 1.25%, and that this rate be made retroactive to date of first operation."

Other minutes referring to the approval of Mr. Francis were passed in reference to a reduction in renewal rates for other systems.

It would of course have been manifestly improper for the Commission to approach our Engineer for an opinion in this matter, and Mr. Francis informs us that the alleged statement of the Chief Engineer "that this matter had been taken up with Mr. Francis and approved" was wholly unwarranted. The statement subsequently made that the depreciation rate was changed on the recommendation or approval of Mr. Francis, was, of course, also baseless.

We consider the revision of depreciation rates, made retroactive in many cases to the date of first operation and consequent reduction of amounts standing to the credit of renewal reserves, was an unwise pro-

See also P 73

Mr. R. A. Ross is one of my master men in the Hydro-Electric Power Commission.

On December 20th, 1922, the subject again came before the Commission on appeals by the Minister of a meeting of that date, from which we quote:

> The Chief Engineer having recommended a revised depreciation rate, calculated on the basis of the life of the equipment, also having advised that this matter had been taken up with Mr. Francis, and approved, it was decided that the depreciation rate for the Queenston System should be fixed at 1.83%, and that this rate be made retroactive to date of first operation.

Other minutes referring to the approval of Mr. Francis were passed in reference to a revision of annual rates for other systems.

It would of course have been manifestly improper for the Commission to approach our Engineer for an opinion in this matter, and Mr. Francis informs us that on alleged discussion of the Chief Engineer that this matter had been taken up with Mr. Francis and approved" was totally unwarranted. The statement authoritatively made that the depreciation rate was changed on the recommendation or approval of Mr. Francis, was, of course, also baseless.

In consider the revision of depreciation rates, made retroactive to only some in the back of first operation and consequent reduction of amounts standing to the credit of renewal reserves, was an unwise pro-

ceeding on the part of the Commission and more especially on account of the disposition made of these reserves. The net results effected by the decision of the Commission on December 20th, 1922, appears from the following table:

System	Balance October 31st, 1921, before Adjustment	Amount taken from the reserve upon the reduction of the renewal rates	Balance October 31st, 1921, after Adjustment	Increase in Reserve during 1922, through charges in power costs, interest accretions, etc.	Balance October 31st, 1922.
Niagara	$2,228,722.27	-	$2,228,722.27	$246,698.75	$2,475,421.02
Severn	227,347.21	$119,976.30	107,370.91	25,372.81	132,743.72
Eugenia	181,830.21	68,106.98	113,723.23	23,477.46	137,200.69
Wasdell's	38,973.73	10,578.06	28,395.67	7,168.45	35,564.12
Muskoka	25,471.39	13,398.99	12,072.40	3,142.77	15,215.17
St.Lawrence	76,369.49	25,398.57	50,970.92	13,772.86	64,743.78
Rideau	38,365.47	16,242.07	22,123.40	11,647.60	33,771.00
Thunder Bay	41,302.22	-	41,302.22	1,131.29#	42,433.51
Ottawa	-	-	-	434.59	434.59
	$2,858,381.99	$253,700.97	$2,604,681.02	$332,846.58	$2,937,527.60

- Represents interest accretions for 1922. No provision was made for renewals out of revenue for 1922.

In addition to the amount ($253,700.97) shown in the foregoing table as having been transferred from the renewal reserves, there was, as we have shown in our report upon The Ontario Power Company, a reduction made in renewal reserves of that undertaking of the Commission of $379,289.19 as at October 31st, 1922.

owing on the part of the Commission and more especially on account of the disposition made of their reserves. The net results effected by the decision of the Commission on December 15th, 1922, appears from the following table:

System.	Balance owing to the Commission October 31st, 1921, before the reversal of the adjustment rate.	Amount taken from the reserves.	Balance owing to the Commission October 31st, 1922, after adjustment.	Increase in reserves during the year 1922 through changes in power rates, interest, etc.	Balance October 31st, 1922.
Niagara	$2,222,722.37	-	$2,222,722.37	$2,474,411.62	
Sarnia	227,247.11	$112,274.30	109,972.81	21,271.01	131,243.82
Napanee	181,820.21	84,124.29	97,696.92	32,677.14	130,374.06
Madoc's	22,272.72	10,272.02	12,000.27	7,126.42	19,126.69
Bracebridge	12,271.29	12,272.92	1,000.63	3,112.77	4,113.40
St. Lawrence	72,222.27	22,222.27	50,000.00	14,772.62	64,772.62
Niagara	22,222.27	11,111.27	22,122.60	11,547.60	33,771.00
Thunder Bay	41,272.22	-	41,272.22	1,121.22	42,422.22
Ottawa	-	-	-	424.22	424.22
	$2,222,221.27	$222,722.27	$2,222,221.22	$22,227,222.22	

4 - Improvements internal assessions for 1922.
No provision was made for renewals out of revenue for 1922.

In addition to the amount ($222,722.27) shown in the foregoing table as having been transferred from the renewal reserves, there was, as we have shown in our report upon the Ontario Power Company, a reduction made in renewal reserves of that undertaking of the Commission of $277,222.12 on 31st October 31st, 1922.

Of the amount, $253,700.97, above mentioned, the sum of $216,832.05 was credited to municipal corporations interested, $36,236.37 to contingency reserves and $632.55 to Rideau Power Development. The transfer of $216,832.05 to the credit of municipal corporations reduced the average annual costs of power to them from the date of first operation, and brought these annual costs more nearly to a parity with the estimated costs furnished to the corporations. The amounts credited to them, however, were not paid over to the municipal corporations at once, but were employed to cancel debits on power accounts or retained for the purpose of meeting future accounts. The Commission was thus enabled to employ a large portion of the amounts to the credit of municipal corporations for its general purposes at a cost to it of four per cent. per annum for interest thereon.

In the case of The Ontario Power Company, the renewal reserve, which our Consulting Engineer had reported to be inadequate before the reduction, was further reduced, and the Commission enabled to determine as the "cost of power" produced by that company a figure less than would otherwise have been necessary. In the reduction of depreciation rates, as in other courses taken by the Commission, present apparent advantages to consumers of power appear to over-ride considerations of the future and evidence a wide disregard of the interests of the Province as a whole. The building up of adequate renewal reserves, while at the same time the works of the Commission are maintained at the standard condition of efficiency, provides not only a fund which assures municipal corporations that the works towards the

Of the amount, $[illegible],[illegible],97, some municipal, the sum of $[illegible],[illegible],00 was applied to municipal corporations interested, $[illegible],[illegible],17 to sinking fund reserves and $[illegible] to Hydro Commission. The transfer of $[illegible],[illegible],00 to the credit of municipal corporations reduced the average annual costs of power to them from the date of first operation, and brought these annual costs more nearly in a parity with the estimated costs furnished to the corporations. The amounts credited to them, however, were not paid over to the municipal corporations at once, but were employed to annual helpful to power consumers or retained for the purpose of meeting future commitments. The Commission was then enabled to employ a large portion of the results to the credit of municipal corporations for its general purposes at a cost to it of four per cent. per annum for interest thereon.

In the case of the Ontario Power Company, the renewal reserve, which our Consulting Engineer had reported to be inadequate before the reduction, was further reduced, and the Commission undertook to determine as the "cost of power" produced by that company a figure less than would otherwise have been necessary. In the reduction of depreciation rates, as in other courses taken by the Commission, patent apparent advantages to consumers of power appear to ever-vile consideration of the future and evidence a wide disregard of the interests of the Province as a whole. The building up of adequate renewal reserves, while at the same time the rates of the Commission are maintained at the standard condition of efficiency, provides not only a fund which assures municipal corporations that the rates charge the

cost of which they are contributing, will be in an efficient operating condition, but also provides additional security to the Province for the advances made by it to meet the cost of the works. It is but natural to expect that a consideration of the interests of the Province as a whole would lead the Commission to confer with and obtain the approval of the Government before adopting a policy reversing one deliberately adopted and consistently followed for years. This it did not do.

After consideration of the reports of our Consulting Engineer upon the works of the several systems, and a full investigation, we find that, while, subject to the approval of the Lieutenant-Governor in Council, a reduction of depreciation rates relating to some of the works of the Commission from those originally prevailing would be justifiable, a reduction ranging from 25% to 55% in respect of nearly all the undertakings of the Commission was wrong and unsound. The prospective reduction of the renewal fund apparently paved the way for the commendation of the Commission in the public press. The following paragraph, appearing in the press under date of September 14th, 1923, is a sample:

> "A reduction of rates which affects three cities, thirty-five towns, seventy villages and one township, was formally announced yesterday afternoon at the offices of the Hydro-Electric Commission."

cost of which they are contributing, will be in an efficient operating condition, but also provides additional security to the Province for the advances made by it to meet the cost of the works. It is but natural to expect that a consideration of the interests of the Province as a whole would lead the Commission to confer with and obtain the approval of the Government before adopting a policy involving one definitely adopted and consistently followed for years. This it did not do.

After consideration of the reports of our Consulting Engineer upon the works of the several systems, and a full investigation, we find that, while, subject to the approval of the Lieutenant-Governor in Council, a reduction of depreciation rates relating to some of the works of the Commission from those originally prevailing would be justifiable, a reduction ranging from 12½ to 50% in respect of nearly all the undertakings of the Commission was wrong and unsound. The prospective reduction of the revenue fund correspondingly paved the way for the commendation of the Commission in the public press. The following paragraph, appearing in the press under date of September 14th, 1920, is a sample:

> "A reduction of rates which affects three cities, twenty-five towns, seventy villages and one township, was formally announced yesterday afternoon at the offices of the Hydro-Electric Commission."

We attach hereto as Appendix "C", Schedule "A" and Schedule "B" of renewal rates now used by the Commission for its various properties, giving the following information:

(a) Class of Property.
(b) Years Life.
(c) Residual Values.
(d) Depreciation rate on straight line basis.
(e) Depreciation rate on sinking fund basis.

There is also attached with these schedules a memorandum by the Chief Engineer of the Commission, setting forth reasons for the adoption of the rates included in the schedules.

Section 18

RESERVE FOR CONTINGENCIES

The following table shows the balance in the reserve for contingencies at October 31st, 1922, for each of the Hydro Systems under the direction of the Commission, together with the remarks of our Consulting Engineer relative to the adequacy thereof, made by him in respect of the balances at October 31st, 1921, which were, of course, less than on October 31st, 1922, the figures of which are shown on the table:

We attach hereto as Appendix "C", Schedule "A" and Schedule "B" of recent rates now used by the Commission for its various properties, giving the following information:

(a) Class of Property.
(b) Power Site.
(c) Installed Plants.
(d) Depreciation rate on straight line basis.
(e) Depreciation rate on sinking fund basis.

There is also attached with these schedules a memorandum by the Chief Engineer of the Commission, setting forth reasons for the adoption of the rates included in the schedules.

Section 12

RESERVE FOR CONTINGENCIES

The following table shows the balance in the reserve for contingencies at October 31st, 1924, for each of the Hydro Systems under the direction of the Commission, together with the reserve of our Installing Engineer relative to the stepping thereof, made by him in respect of the balances at October 31st, 1923, which were, of course, here then as October 31st, 1924, the figures of which are shown on the table:

System	Balance, October 31,1922	Comments of Consulting Engineer in respect of Balances as at October 31, 1921
Niagara System	$ 4,853.87	Consideration should be given to a larger provision for a contingency reserve.
Severn System	29,220.08	Reserve should be increased to $20,000 or $30,000.
Eugenia System	12,801.38	Reserve should be increased to $25,000 or $30,000.
Wasdell's System	6,068.13	Reserve should be increased to $5,000 or $10,000.
Muskoka System	3,375.57	Reserve should be increased to $5,000 or $10,000.
St. Lawrence System	6,255.17	Reserve should be increased to $12,000 or $15,000.
Rideau System	7,673.25	Reserve should be increased to $15,000 or $20,000.
* Thunder Bay System	4,601.65	No comments.
Ottawa System	None	Reserve of about $5,000 should be established to provide for losses which might be incurred through the operation of rural lines.
Essex System	None	Reserve should be built up of $8,000 or $10,000.
Thorold System	None	It would seem to be a good policy to establish a reserve for contingencies.

* - Not in full operation.

System	Balance, October 31, 1951	Comments if Resulting Balance in Reserve of Estimate as of October 31, 1951
Wiggins System	$ 6,[illegible]	Consideration should be given to a larger provision for a contingency reserve.
Jones System	[illegible]	Reserve should be increased to $50,000 or $60,000.
Smith System	[illegible]	Reserve should be increased to $25,000 or $30,000.
Randall's System	[illegible]	Reserve should be increased to $5,000 or $10,000.
Hudson System	[illegible]	Reserve should be increased to $5,000 or $10,000.
Mr. Lawson System	[illegible]	Reserve should be increased to $15,000 or $18,000.
Allen System	[illegible]	Reserve should be increased to $15,000 or $20,000.
* Thomas Day System	[illegible]	No comment.
Clinton System	None	Reserve of about $5,000 should be established to provide for losses which might be incurred through the operation of rural lines.
Lewis System	None	Reserve should be built up to at $5,000 or $10,000.
Shuyler System	None	It would seem to be a good policy to establish a reserve for contingencies.

* — Not in full operation.

It will be noted from this table that the balances in the reserve for contingencies, although increased in 1922, are still in all but two instances below the requirements considered adequate by our Consulting Engineer.

Special attention is directed to the balance of $4,853.87 on the Niagara System. This reserve is entirely inadequate and should be built up to an amount of approximately $500,000. During the year 1922 the charges made against the reserve for contingencies for the Niagara System were $242,707.74 and the additions to the reserve through charges included in the cost of power and interest accretions amounted to $222,696.60. The charges thus exceeded the credits in this year by more than $20,000.

In the preceding section of this report attention has been directed to the reduction in the reserve for renewals to rates which provide only for the renewal of the property and do not provide for obsolescence of plant through development of electrical science. This might well have been provided for when determining the amount to be appropriated to reserve for contingencies. With contingency reserves standing at figures much lower than they should be, a prudent and natural course of procedure would have been to transfer the amounts or major part thereof available through justifiable reduction of renewal reserves to the reserves for contingencies. On referring back to our discussion of renewal reserve it will

It will be noted from this table that the balance in the reserve for contingencies, although increased in 1912, was still in all but two instances below the requirements considered adequate by our Consulting Engineer.

Special attention is directed to the balance of $4,322.07 on the Niagara System. This reserve is entirely inadequate and should be built up to an amount of approximately $200,000. During the year 1912 the charges made against the reserve for contingencies for the Niagara System were $212,777.74 and the additions to the reserve through charges included in the cost of power and interest earnings amounted to $222,924.30. The charges thus exceeded the credits in this year by more than $20,000.

In the preceding section of this report attention has been directed to the reduction in the reserve for renewals to take care provide only for the renewal of the property and do not provide for obsolescence of plant through development of electrical science. This might well have been provided for when calculating the amount to be appropriated to reserve for contingencies. With contingency reserves standing at figures much lower than they should be, a prudent and natural source of revenue would have been to transfer the amounts or major part thereof available through justifiable reduction of renewal reserves to the reserves for contingencies. On referring back to our discussion of renewal reserves it will

be found that out of a reduction of nearly $254,000.00 only $36,000,00 was credited to contingencies.

Special attention is directed to the reserve for contingencies in the case of The Ontario Power Company. This amounted to $527,684.30 at October 31st, 1922, but, with the exception of $189,924.84, was made up of reserves for accrued liabilities and other assets of a most questionable character. Our Consulting Engineer has pointed out that the contingencies reserve for The Ontario Power Company is entirely inadequate and, while it is not anticipated that serious accidents will occur such as the accident of April 20th, 1922, the estimated cost of which is $300,000, this accident nevertheless furnished a striking proof of the necessity of having reserves for contingencies of such amounts as would provide for extraordinary losses. We are of opinion that this contingency reserve should be very substantially increased.

As noted in our report on the Queenston-Chippawa Power Development, estimates prepared by the engineers of the Commission, and submitted to our Consulting Engineer, setting forth the probable cost of power from this Development, included no amount whatsoever in respect of contingencies. Our Consulting Engineer in dealing with this subject recommends that contingency reserves be provided on this work, and in this we are in complete agreement with him. As pointed out in our discussion of renewal reserves, our Consulting Engineer also considered that the rates applied by the engineers of the Commission in this respect were also inadequate.

be found that out of a reduction of nearly $[illegible],000.00 only $[illegible],000.00 was required as contingencies.

Special attention is directed to the reserve for contingencies in the case of The Ontario Power Company. This amounted to $[illegible],[illegible].00 at October 31st, 19[illegible], but, with the exception of $[illegible],[illegible].36, was made up of reserves for actual liabilities and other assets of a most questionable character. Our Consulting Engineer has pointed out that the adequate reserve for The Ontario Power Company is entirely inadequate and, while it is not anticipated that serious accidents will occur such as the accident of April 20th, 1922, the estimated cost of which is $[illegible],000, this accident nevertheless furnished a striking proof of the necessity of having reserves for contingencies. It was accounts as would provide for extraordinary losses. We are of opinion that this contingency reserve should be very substantially increased.

As noted in our report on the Queenston-Chippawa Power Development, estimates prepared by the engineers of the Commission, and submitted to our Consulting Engineer, setting forth the probable cost of power from this Development, included no amount whatsoever in respect of contingencies. Our Consulting Engineer in dealing with this subject recommends that contingency reserves be provided on this work, and in this we are in complete agreement with him. As pointed out in our discussion of renewal reserves, our Consulting Engineer also considered that the rates applied by the engineers of the Commission in this respect were also inadequate.

We believe that for a 550,000 horse-power plant, an annual amount of between $400,000 and $500,000 might well be set aside in respect of contingencies to take care of happenings of a catastrophic nature which, after all, are not altogether improbable occurrences.

Section 19

OTHER CHARGES

As stated when setting forth the charges entering into the cost of power, in addition to interest, sinking fund, renewal reserve and contingencies, the Commission is required to provide for line loss, for the cost of operating, supervising, maintaining and insuring the works, and for such amounts as may be required to provide for the remuneration of the Commissioners and in respect of superannuation, retiring allowances, sick benefit and so forth.

These charges, insofar as we have been able to learn, have all been provided for in accordance with the requirements of the Act with the possible exception of line loss, for which there seems to be no specific provision in the distribution of costs among the municipalities. Line loss is necessarily provided for automatically by the system which the Commission uses in billing the municipalities. The allocation of line loss to the different municipalities may not be in exact accordance with the losses accruing in respect of each, but we are informed by our Consulting Engineer

We believe that for a 225,000 horse-power plant, an annual amount of between 240,000 and 240,000 might well be set aside in respect of contingencies to take care of happenings of a catastrophic nature which, after all, are not altogether improbable occurrences.

Section 19

OTHER PLANTS

As stated when setting forth the charges relating into the cost of power, in addition to interest, sinking fund, renewal reserve and contingencies, the Commission is required to provide for line loss, for the cost of operating, supervising, maintaining and insuring the works, and for such amounts as may be required to provide for the remuneration of the Commissioners and in respect of superannuation, retiring allowances, sick benefit and so forth.

These charges, insofar as we have been able to learn, have all been provided for in accordance with the requirements of the Act with the possible exception of line loss, for which there seems to be no specific provision in the distribution of costs among the municipalities. The Act is apparently provided for automatically by the system which the Commission uses in billing the municipalities. The allocation of line loss to the different municipalities may not be in exact accordance with the Act, adhering in respect of each, but we are informed by our Consulting Engineer

that this is a very difficult item to compute with accuracy, and it would appear that the methods now employed by the Commission in this respect, are fairly equitable to all consumers.

The main items coming under this heading include the cost of operation and the cost of maintaining the works. Of these two, maintenance is probably the most important in that it has a definite bearing upon the basis on which the renewal reserve is established. As previously pointed out in our comments on renewal reserves, it is the established policy of the Commission to maintain the works and keep each and every portion of the system in a condition to operate in accordance with the requirements of economical production, which is considered to be about 75% as good as new. As far as we can learn it would appear that the Commission has strictly adhered to this policy, and that all works operated by it are kept up to at least this standard of efficiency. We believe that many of the plants are kept above this standard and on the whole it may be stated that the condition of all plants visited by us has been excellent, and much credit is due the operating department whose duty it is to see that the standard of efficiency is maintained.

that this is a very difficult item to compute with accuracy, but it seems apparent that the matters now employed by the commission in this respect, are fairly equitable to all concerned.

The main items coming under this heading include the cost of operation and the cost of maintaining the works. Of these two, maintenance is probably the most important in that it has a definite bearing upon the basis on which the renewal reserve is established. As previously pointed out in our remarks on renewal reserve, it is the established policy of the Commission to maintain the works and keep each and every portion of the system in a condition to operate in accordance with the requirements of economical production, which is considered to be about 75% as good as new. As far as we can learn it would appear that the Commission has strictly adhered to this policy, and that all works operated by it are kept up to at least this standard of efficiency. We believe that many of the plants are kept above this standard and by the which is prov ba stated that the condition of all plants visited by us has been excellent, and really credit to the operating department whose duty it is to see that the standard of efficiency is maintained.

Section 20

METHOD OF ARRIVING AT COST OF POWER

The various elements entering into the cost of power supplied by the Commission to contracting municipal corporations as set forth in Section 23 of The Power Commission Act have been commented upon in the preceding sections. The duty of adjusting and apportioning these several items of cost amongst the municipal corporations comprising the different "Systems", in order that each may bear its just proportion, is cast by the Act upon the Commission from which there is no appeal. What is termed the "cost" of power in the first part of Section 23 of the Act is the original cost to the Commission at the point of production, or generation. Such cost of power consumed by all municipal corporations, in a system having as a general rule the same source, is without difficulty apportionable amongst the municipal corporations, employing the amount of power supplied to each as a basis. This basis can also be applied to determine the proportions of other elements of "cost" or annual payments to be made in addition to original "cost". The proportions of annual payments to be made by a system on interest and sinking fund account in connection with the cost of transmission lines, transformer stations, and so forth, necessarily vary amongst the municipal corporations in the system, so that although each may pay for its power "at cost", the "cost" must necessarily be greater in some than in others.

The relative importance of the constituent items of the cost of power has been dealt with in our report entitled "Cost of Money Advanced to the

Hydro-Electric Power Commission by the Province of Ontario". In that report will be found tables showing the percentage ratio of the various items entering into the cost of power for the year ending October 31st, 1921, the "Systems" being considered under two headings:

(a) Systems in which all or the greater portion of the power is supplied by a generating plant, part of the works of the system.

(b) Systems in which the power is purchased from outside sources.

For convenience of reference these tables are here repeated:

(a) Systems in which Power is Generated

	# Thunder Bay	* Severn	* Wasdell's	* Eugenia	Muskoka	Rideau
Power Purchased	6.02	8.9	-	-	-	5.72
Interest	73.13	29.7	34.6	37.90	35.63	53.03
Renewals	-	18.0	15.2	19.05	19.56	21.55
Sinking Fund	-	9.0	13.4	5.65	2.77	-
Maintainance	3.37	11.7	7.9	11.60	10.13	2.82
Operating	11.93	9.5	18.1	7.25	20.38	9.41
Overhead and General Expense	5.55	12.6	10.2	18.02	10.42	6.87
Contingencies	-	0.6	0.6	0.53	1.11	0.60
Surplus	-	-	-	-	-	-
	100%	100%	100%	100%	100%	100%

Note: # - In 1921 Cameron Falls Development in the Thunder Bay System had only two generators in operation and construction work was still under way. No renewals, contingencies or sinking fund charges had been applied in that time. As soon as these charges are applied the effect will be to reduce the ratio that interest

Ogden-Liverpool zone (Montreal) by the Province of Ontario". In that report will be found tables showing the generating units of the various lines existing in the Dept of power for the year ending December 31st, 1925, the "Systems" being considered under two headings:

(a) Systems in which all or the greater portion of the power is supplied by a generating plant, part of the area of the system.

(b) Systems in which the power is purchased from outside sources.

The summaries of various lines in Ontario are here separate:

(a) Systems in which power is generated

	Number	Power	Reliability	Repairs	Improvements	Others
Power Purchased	6.22	4.7	-	-	-	1.74
Interest	12.12	12.7	14.4	27.23	22.22	22.22
Insurance	-	13.3	12.5	17.22	13.24	21.24
Sinking fund	-	4.4	12.1	2.22	2.27	-
Maintenance	6.27	13.7	7.4	11.23	13.13	7.22
Operating	13.28	2.2	14.1	7.22	22.22	1.21
Overhead and General Expense	6.22	12.1	10.1	11.12	12.12	1.27
Contingencies	-	0.4	3.8	3.22	1.11	1.23
Surplus	-	-	-	-	-	-
	1926	1925	1924	1923	1922	1921

Note: 1 - In 1921 Toronto Hydro Development in the Province by System had only two generators in operation and consumption was so still under way. In consequ. engineers or stating that changes had been applied in that time. As soon as these changes are applied the effect will be to reduce the ratio that interest

bears to the whole cost, and the figure of 73% given may then be considerably reduced.

* - These three systems have an interchange of power and all purchase power from the Orillia plant, but each has its own generating plant as well.

(b) Systems which Purchase Power

	# Niagara	St. Lawrence	Thorold	Essex
Power Purchased	55.96	34.9	38.2	33.9
Interest	15.50	23.9	4.2	18.6
Renewals	7.49	15.7	1.1	13.3
Sinking Fund	4.93	7.8	2.3	4.1
Maintenance	3.84	5.3	0.4	13.6
Operating	4.51	2.3	0.8	4.3
Overhead and General Expense	6.90	9.6	-	12.2
Contingencies	0.87	0.5	-	-
Surplus	-	-	53.0	-
	100%	100%	100%	100%

Note: # - Niagara System in 1921 did not include the group of generating plants at Niagara and was shown in the books of the Commission as a purchaser of power.

In group (b) the item "Power Purchased" forms a large percentage of the total cost of power. In the Niagara System this amounts to 55.96 per cent., The Ontario Power Company and The Toronto Power Company being considered as entities distinct from the Commission and vendors of power to the Commission. When consideration is given to the fact that these companies are controlled and

have to the state part, and the figure of 75% given may then be considerably reduced.

* - These large systems have an interchange of power and all purchase power from the Ontario system, but each has its own generating plant as well.

(b) Province which increased Power

	Niagara	St. Lawrence	Ontario	Quebec
Power Purchased	22.34	34.7	32.2	50.7
Interest	12.70	22.7	4.2	12.4
Taxes	7.02	12.7	3.2	11.2
Working Fund	4.20	7.3	2.3	4.1
Maintenance	3.25	5.3	2.2	11.1
Operating	4.21	5.8	2.7	4.2
Overhead and General Expense	4.40	5.3	-	12.2
Contingencies	0.27	0.2	-	-
Surplus	-	-	52.4	-
	100%	100%	100%	100%

Table 4 - Figures given in 1921 did not include the group of generating plants at Niagara and was shown in the table of the Commission as a purchaser of power.

In group (b) the item "Power Purchased" forms a large percentage of the total cost of power. In the Niagara System this accounts to 22.34 per cent., the Ontario Power Company and the Quebec Power Company being considered as entities distinct from the Commission and vendors of power to the Commission. This consideration is given to the fact that these companies are controlled and

operated by the Commission, it becomes apparent that the item of 55.96 per cent., as far as the Commission is concerned, is divisible into the component parts of the cost of power to these companies and that if so divided, the percentages for interest, renewals, sinking fund and so forth would be increased. The relationship of the charges entering into the cost of power from the combined operation of the Queenston-Chippawa Power Development, The Ontario Power Company and The Toronto Power Company is illustrated by the following table:

Estimate of Operating Expenses of The Ontario Power Company, The Toronto Power Company, including Toronto Steam Plant (not operating), and The Queenston-Chippawa Power Development

	Total of Four Plants, three operating			
	550,000 H.P.	600,000 H.P.	650,000 H.P.	700,000 H.P.
Interest	74.76%	74.73%	74.78%	69.00%
Operation	6.07	6.06	6.05	5.52
Sinking Fund	5.77 *	5.61*	5.46 *	12.92
Maintenance	3.82	3.85	3.90	3.61
Water Rental	3.29	3.49	3.58	3.28
Depreciation	2.80	2.87	2.95	2.80
Taxes and Insurance	2.41	2.34	2.28	1.98
Bank exchange, bond discount, etc.	1.03	1.00	0.97	0.85
Add charges on No. 16 unit, O.P.Cp., - interest 6%; sinking fund 1.8%; depreciation 0.38%	0.05	0.05	0.05	0.04

Note: * - Sinking Fund deferred on the Queenston-Chippawa plant

The most important element and the main governing factor in the cost of power is undoubtedly the annual charge for interest on capital investment,

operated by the Commission, it becomes apparent that the item of 24.47 per cent, as far as the Commission is concerned, is striking into the component parts of the cost of power to their companies and that if so divided, the percentages for interest, renewals, sinking fund and so forth would be increased. The relationship of the charges entering into the cost of power from the combined operation of the Queenston-Chippawa Power Developments, the Ontario Power Company and the Toronto Power Company is illustrated by the following table.

Details of Operating Expenses of The Ontario Power Company, The Toronto Power Company, including Figures from Final Joint operation, and the Queenston-Chippawa Power Development

---

Total of Four Plants, Here operating

580,000 H.P. 420,000 H.P. 680,000 H.P. 730,000 H.P.

Interest	7.70%	7.78%	7.78%	22.47%
Operation	2.07	2.05	2.36	2.22
Sinking Fund	2.77 *	2.81*	2.44 *	12.82
Maintenance	2.22	2.32	2.30	2.21
Water Rental	3.39	2.49	2.22	2.15
Depreciation	2.20	2.07	2.27	2.27
Taxes and Insurance	2.41	2.34	2.20	1.94
Bad debts, Bond discount, etc.	1.20	1.20	0.97	0.26
Add Amount to Co. 1% Sinking Fund 1.8%; Depreciation 2.8%	0.28	0.25	0.28	0.24

Note: * - Sinking Fund included in the Queenston-Chippawa plant

---

The most important element and the main governing factor in the cost of power is undoubtedly the annual charge for interest on capital investment,

which in the table given above amounts to about 70% of the total. When to interest charges are added payments on sinking fund and renewal reserve accounts, the relative percentage to the total cost amounts to about 85%. This fact cannot be too strongly impressed upon all concerned with the future of the undertakings of the Commission. It should ever be kept in view when expenditures are being made or are contemplated for power developments, and every effort made to keep construction costs as low as possible, having due regard to proper and effective design and workmanship. Each ten dollar increase in the capital cost per horse-power of a power development of the Commission, entails a substantial increase in the annual cost per horse-power of all energy supplied from such development. We have previously drawn attention to the fixed rate of interest of four per cent. per annum which prevailed under The Power Commission Act until the amendment to the Act in 1915 to which effect was not given until 1917. Comment has also been directed to the thirty-year sinking fund basis provided by the Act and to the standard renewal rates adopted by the Commission. Prior to 1917, assuming capital expenditure was properly estimated and was kept within the estimates, it was a simple matter to forecast the cost of power, because the main elements of such cost were definitely predetermined. The changes in the rate of interest payable by the Commission to the Province, and by municipal corporations to the Commission, upon capital expenditures to meet advances by the Province subsequent to October 31st, 1914, effected by statutory amendments made in 1915 and 1918, and dealt with fully in our report on the "Cost of Money Advanced to the Hydro-Electric Power Commission by the Province of Ontario",

which in the table given above amounts to about 70% of the total. When to interest charges are added payments on sinking fund and renewal reserve accounts, the relative percentage to the total cost amounts to about 86%. This fact cannot be too strongly impressed upon all concerned with the future of the undertakings of the Commission. It should ever be kept in view when engineers are being made or are contemplated for power developments, and every effort made to keep construction costs as low as possible, having due regard to proper and effective design and workmanship. Men can delay increase in the capital cost per horse-power of a power development of the Commission, entails a substantial increase in the annual cost per horse-power of all energy supplied from such development. We have previously drawn attention to the fixed rate of interest of four per cent, per annum which prevailed under the Power Commission Act until the amendment to the Act in 1919 to which effect was not given until 1917. Comment has also been directed to the thirty-year sinking fund basis provided by the Act and to the standard renewal rates adopted by the Commission. Prior to 1917, financing capital expenditure was properly estimated and was kept within the estimates, it was a simple matter to forecast the cost of power, because the main elements of such cost were definitely predetermined. The changes in the rate of interest payable by the Commission to the Provinces, and by municipal corporations to the Commission, upon capital expenditures to meet advances by the Provinces subsequent to October 31st, 1919, effected by statutory amendments made in 1919 and 1919, and dealt with fully in our report on the "Cost of Power Advances to the Hydro-Electric Power Commission by the Province of Ontario".

rendered it somewhat more difficult to determine in advance the cost of power to municipal corporations entering or proposing to enter into contracts with the Commission for a supply of power.

The Commission, has, however, had considerable latitude in several outstanding respects. There is no definite restriction regarding renewal rates, and as pointed out, it has greatly reduced its renewal reserves thereby making substantial reductions in the cost of power. It has fixed at will, the amount credited to contingency reserves until now many of these reserves are, in our opinion, much too small. In the establishment of sinking fund, the Commission appears to have assumed authority under the terms of the Niagara Development Acts, to entirely depart from the provisions of The Power Commission Act and has greatly extended the period of repayment thereby decreasing the annual charges entering into the cost of power.

For the purpose of illustrating in concrete form the component parts of the cost of power charged to a municipal corporation which has entered into a contract with the Commission for a supply of electrical power or energy, and to exhibit a comparison of the total cost to each of two municipalities of the same system at different distances from the source of supply, our Accountants, under instructions, have prepared charts which, with comments thereon, are included in their report "General Accounting System".

The chart inserted as page 88 of this report gives a graphic representation of the various elements entering into the cost of power to the municipal corporation of the Town of Goderich in the Niagara System for the

year ending October 31st, 1921. The chart forming page 89, exhibits a comparison between the cost of power chargeable respectively to the municipal corporations of Niagara Falls and Windsor, the two furthest distant from one another in the Niagara System.

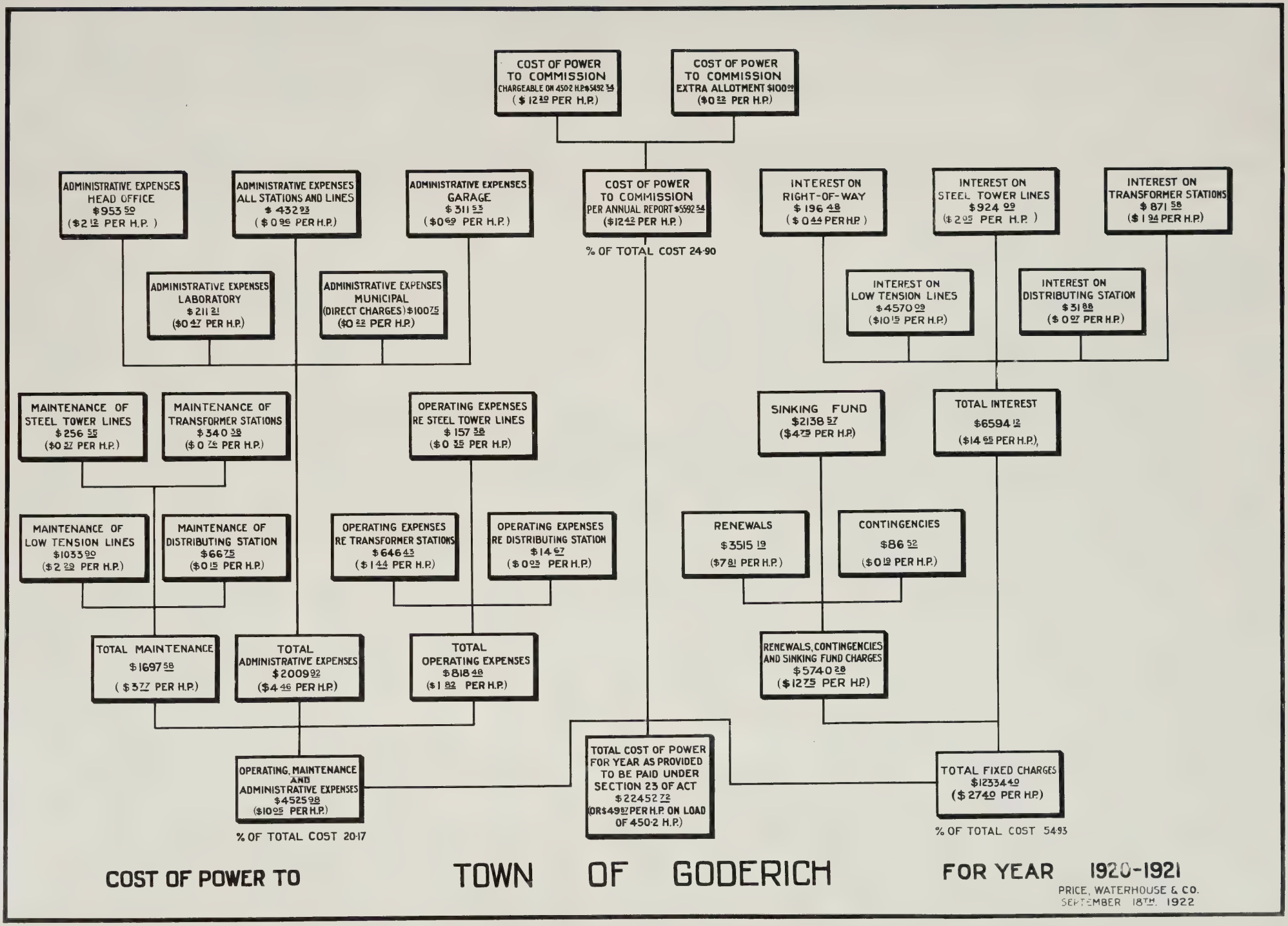
Method of Billing

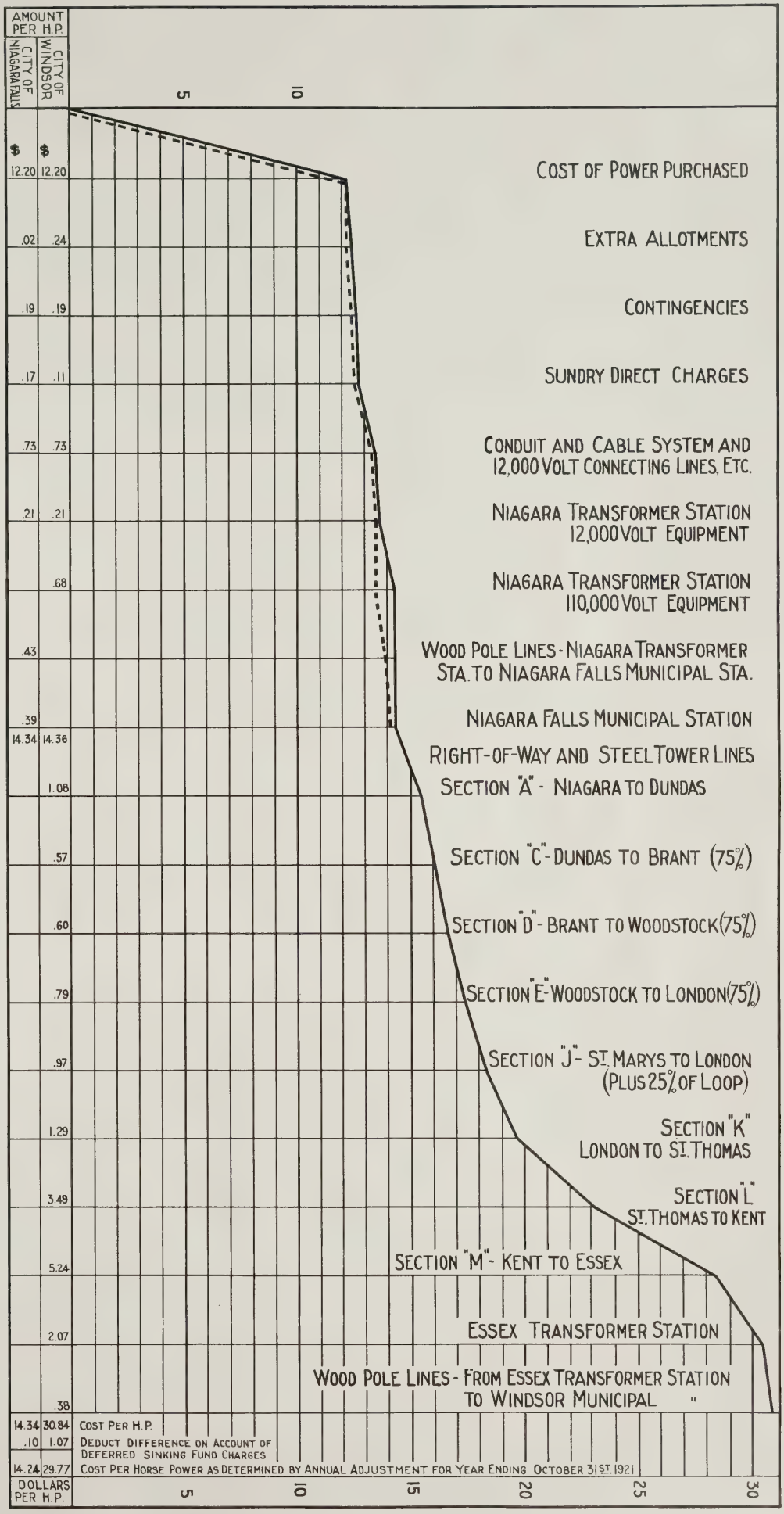
The Commission has adopted the convenient practice of fixing for each municipal corporation, for portions or all of each year, an estimated cost per horse-power to be paid. Accounts are rendered for each month of the year on the basis of such estimated cost. At the expiration of the fiscal year, the actual cost of such power, as determined by the Commission, is adjusted and apportioned by the Commission amongst the several municipal corporations of the different systems and a "thirteenth bill" rendered. Dependent upon the accuracy of the Commission's estimated cost or upon such estimated cost being greater or less than the finally determined actual cost, the "thirteenth bill" may show no balance due either way, or a balance in favour of or against the municipal corporation. If there be a balance in favour of the Corporation, interest thereon at the rate of four per cent. per annum is allowed it by the Commission until the balance is exhausted by charging against it subsequent power bills, and if the balance be against the Corporation, interest thereon until paid at the rate of seven per cent. per annum is charged by the Commission. Except in the case of power bills incurred during the first three years in which a municipal corporation receives power from the Commission, there is no authority for the deferment of payment of power bills, and it is

year ending October 31st, 1921. The chart facing page 28, exhibits a comparison between the year of power shortages respectively to the municipal subscriptions of Niagara Falls and Toronto, the two districts diverge from one another in the figures forward.

Surplus of Utility

The Commission has adopted the monetary penalty of fifty for each municipal corporation, for periods of all or each year, an estimated sum per horse-power is to pain. Accounts are rendered for each month of the year on the basis of such estimated rate. At the expiration of the fiscal year, the actual rate of each power, as determined by the Commission, is ascertained and apportioned by the Commission amongst the several municipal corporations of the different districts and a "statement will" rendered. Dependent upon the accuracy of the Commission's estimated rate or upon such estimated rate being greater or less than the finally determined actual rate, the "statement will" may show by balance due either way, or a balance in favour of or against the municipal corporation. If there be a balance in favour of the Corporation, interest shall accrue at the rate of four per cent. per annum if allowed it by the Commission until the balance is discharged by subsequent payments in subsequent years bills, and if the balance be against the Corporation, interest thereon until paid at the rate of seven per cent. per annum is charged by the Commission. Assume in the case of power bills incurred during the first three years in which a municipal corporation receives power from the Commission, there is no authority for the discharge of payment of power bills, and it is


COST OF POWER TO COMMISSION CHARGEABLE ON 450·2 H.P. $5492 34 ($12 20 PER H.P.)
COST OF POWER TO COMMISSION EXTRA ALLOTMENT $100 00 ($0 22 PER H.P.)
ADMINISTRATIVE EXPENSES HEAD OFFICE $953 50 ($2 12 PER H.P.)
ADMINISTRATIVE EXPENSES ALL STATIONS AND LINES $432 93 ($0 96 PER H.P.)
ADMINISTRATIVE EXPENSES GARAGE $311 53 ($0 69 PER H.P.)
COST OF POWER TO COMMISSION PER ANNUAL REPORT $5592 34 ($12 42 PER H.P.)
% OF TOTAL COST 24·90
INTEREST ON RIGHT-OF-WAY $196 48 ($0 44 PER H.P.)
INTEREST ON STEEL TOWER LINES $924 09 ($2 05 PER H.P.)
INTEREST ON TRANSFORMER STATIONS $871 58 ($1 94 PER H.P.)
ADMINISTRATIVE EXPENSES LABORATORY $211 21 ($0 47 PER H.P.)
ADMINISTRATIVE EXPENSES MUNICIPAL (DIRECT CHARGES) $100 75 ($0 22 PER H.P.)
INTEREST ON LOW TENSION LINES $4570 09 ($10 15 PER H.P.)
INTEREST ON DISTRIBUTING STATION $31 88 ($0 07 PER H.P.)
MAINTENANCE OF STEEL TOWER LINES $256 55 ($0 57 PER H.P.)
MAINTENANCE OF TRANSFORMER STATIONS $340 38 ($0 76 PER H.P.)
OPERATING EXPENSES RE STEEL TOWER LINES $157 38 ($0 35 PER H.P.)
SINKING FUND $2138 57 ($4 75 PER H.P.)
TOTAL INTEREST $6594 12 ($14 65 PER H.P.)
MAINTENANCE OF LOW TENSION LINES $1033 90 ($2 29 PER H.P.)
MAINTENANCE OF DISTRIBUTING STATION $66 75 ($0 15 PER H.P.)
OPERATING EXPENSES RE TRANSFORMER STATIONS $646 43 ($1 44 PER H.P.)
OPERATING EXPENSES RE DISTRIBUTING STATION $14 67 ($0 03 PER H.P.)
RENEWALS $3515 19 ($7 81 PER H.P.)
CONTINGENCIES $86 52 ($0 19 PER H.P.)
TOTAL MAINTENANCE $1697 58 ($3 77 PER H.P.)
TOTAL ADMINISTRATIVE EXPENSES $2009 92 ($4 46 PER H.P.)
TOTAL OPERATING EXPENSES $818 48 ($1 82 PER H.P.)
RENEWALS, CONTINGENCIES AND SINKING FUND CHARGES $5740 28 ($12 75 PER H.P.)
OPERATING, MAINTENANCE AND ADMINISTRATIVE EXPENSES $4525 98 ($10 05 PER H.P.)
% OF TOTAL COST 20·17
TOTAL COST OF POWER FOR YEAR AS PROVIDED TO BE PAID UNDER SECTION 23 OF ACT $22452 72 (OR $49 87 PER H.P. ON LOAD OF 450·2 H.P.)
TOTAL FIXED CHARGES $12334 40 ($27 40 PER H.P.)
% OF TOTAL COST 54·93
COST OF POWER TO TOWN OF GODERICH FOR YEAR 1920-1921
PRICE, WATERHOUSE & CO.
SEPTEMBER 18TH. 1922



LEGEND

COST PER HORSE POWER FOR YEAR 1920-21 FOR CITY OF NIAGARA FALLS - - - -

" " " " " " " " " WINDSOR ———

HYDRO-ELECTRIC INQUIRY COMMISSION

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

CHART SHOWING RELATIVE COSTS OF POWER TO CITY OF NIAGARA FALLS AND CITY OF WINDSOR, ONT. FOR THE FISCAL YEAR ENDING OCT. 31ST, 1921

Toronto, Oct. 18th, 1922 Made by [illegible] Checked by [illegible] and [illegible]

PRICE, WATERHOUSE & CO.

the duty of the Commission to insist upon prompt payment of power accounts by municipal corporations, which duty, as will be seen by perusal of our reports upon several of the systems, was not fulfilled. Many outstanding accounts of this nature have, however, been wiped out, as has been hereinbefore indicated, by credits to municipal corporations of amounts transferred from renewal reserves.

Section 21

FLAT RATE FOR POWER THROUGHOUT THE PROVINCE

In the course of our inquiry a number of those appearing before us have advocated the establishment of a uniform flat rate for power throughout the Province. Others again have expressed strong opposition to the proposal. It is not only a revolutionary subject, but a very large subject, and we should not venture to make any recommendations in respect of it without going into it much further than we have and giving it very full consideration. Those who support the proposal urge that as the right to use the water belongs to the Province as a whole it should be sold to all alike. It is, of course, at the present time, sold to all alike at the point where it is produced. The fact that some have to pay a larger price than others for power produced at the same point is due to the cost of transmitting it. Coal is sold at the same price at the mines, but the cost of conveying it from the mines to the consumers varies very greatly.

the duty of the Commission to insist upon prompt payment of power accounts by municipal corporations, which duty, as will be seen by perusal of our reports upon several of the systems, was not fulfilled. Many outstanding accounts of this nature have, however, been wiped out, as has been invariably before insisted, by grants to municipal corporations of amounts transferred from general revenue.

Section II

THE RATE FOR LOCAL CONSUMPTION FOR LIGHTING

In the course of our inquiry a number of times suggestions before us have advocated the overlapping of a uniform flat rate for power throughout the Province. Others again have expressed strong opposition to the proposal. It is not only a controversy subject, but a very large subject, and we should not venture to make any recommendations in respect of it without going into it more further than we have and giving it very full consideration. Those who support the proposal argue that as the right to use the water belongs to the Province as a whole it should be sold to all alike. It is, of course, at the present time, sold to all alike at the point where it is produced. The fact that some have to pay a larger price than others for power produced at the same point is due to the cost of transmitting it. Coal is sold at the same price at the mines, but the cost of carrying it from the mines to the consumers varies very greatly.

The supporters of a flat rate quote the practice followed by the Post Office, which delivers a letter ten miles away from the point where it is posted at the same price as it delivers a letter to a point thousands of miles away. They perhaps overlook the fact that for parcel post the rate charged varies with the distance that the parcel is to be carried. In the case of railroads, freight and passenger rates both vary as to distance. This is also the case, to a large extent, with the telegraph system. On the other hand, the additional cost of grades and cuts on a railroad are not taken into consideration when fixing the rates, which are just as low on that portion of a railroad where construction costs have been high as on that part built at much less cost. There is no doubt that in the larger centres and in those points near the place where the power is developed, there would be strong opposition to a flat rate. A flat rate would raise the cost of power in such centres as Toronto, Hamilton, Niagara and Ottawa. It would also be necessary to make a readjustment of the interest which municipalities now have in the undertakings of the Commission, although this interest now amounts to less than two per cent. of the cost.

Instances have been brought to our attention where municipalities at an equal distance from Niagara, have been put, some on the Niagara System, and some on another system where the rates are much higher. It is not unnatural that the municipalities that have to pay the higher rates, object to being put at a disadvantage with municipalities a few miles away which consume no more power, but which are put on a system where power is

The supporters of a Dix-Hole gate-the-gravity-railway by the Jest Effing, which delivers a letter too miles away from the point where it is posted at the same price as it delivers a letter to a point twenty miles of miles away. They probably overlook the fact that for general post the rate charged varies with the distance that the parcel is to be carried. In the case of railways, freight and passenger rates both vary as to distance. This is also the case, if a large vessel, with the telegraph system. On the other hand, the additional cost of posting and sorting on a railroad are not taken into consideration when finding the rate, which is one fact on that portion of a railroad where construction costs have been high or on that part built at much less cost. There is no doubt that in the larger centres and in those points near the places where the power is developed, there would be strong opposition to a flat rate. A flat rate would raise the cost of power in such centres as Toronto, London, Niagara and Ottawa. It would also be necessary to make a readjustment of the interests which municipalities now have in the undertakings of the Commission, although this interest now amounts to less than two per cent. of the cost.

Instances have been brought to our attention where municipalities at an great distance from Niagara, some here and, some on the Ottawa River, and some on another system where the rates are much higher. It is not asserted that the municipalities that have to pay the higher rates, object to being put at a disadvantage with municipalities a few miles away which receive no more power, but which are not on a system where power is

cheaper. This is a difficult matter to deal with and has to be left with the Commission to work out in the most equitable way.

In paying half the cost of rural lines, the Legislature has gone a certain distance in the direction of a flat rate. The question of "water rentals" also has a bearing on this subject and is dealt with in a later part of this report. The whole question resolves itself into one for consideration by the Government and the Legislature.

changes. This is a difficult matter to deal with and has to be left with the Commission to work out in the most equitable way.

In spring half the hour of usual time, the Legislature has a certain discretion in the direction of a fixed rate. The question of water insurance also has a bearing on this subject and is dealt with in a later part of this report. The main question remains largely into one for consideration by the Government but the Legislature.

PART VI - ESTIMATES

Section 22

GENERAL

Two distinct, but in a measure inter-related, classes of estimates in connection with the operations of the Commission have been the subject of investigation by us. The two classes are:

(a) Those estimates made by the Commission of the capital cost of works to be operated by the Commission.

(b) The estimates made by the Commission of the price which will be payable annually by newly incoming municipal corporations to the Commission for electrical power or energy supplied under contracts, such price being the total annual cost of such power to the Commission.

The total cost of power being largely governed, as we have indicated in preceding sections, by the capital investment, the accuracy and value of estimates of class (b), of course, depends in a large measure upon those of class (a) being correct and reliable. Another factor to be considered in estimating the annual cost of power in any particular case is the accuracy of the estimate of the amount of power that will be required. It will readily be realized that if the quantity of power consumed by a municipal corporation be greater or less than its estimated requirements, there will be a corresponding variation in the price payable for power, because to arrive at the estimated cost per horse-power the proportion of fixed charges and other elements of costs apportioned to any municipal corporation is divided by the number of horse-power estimated to be required.

PART IV - ESTIMATES

Section 22

GENERAL

The district, but is a matter inter-related, always of evidence in determining with the operations of the Commission have the subject of investigation by us. The two classes are:

(a) Those estimates made by the Commission of the capital cost of works to be operated by the Commission.

(b) The estimates made by the Commission of the price which will be payable annually by newly incoming municipal corporations to the Commission for electrical power or energy supplied under contracts, and which, when the total annual cost of such power to the Commission.

The total cost of power being largely governed, we so have indicated in preceding sections, by the capital investment, the accuracy and value of estimates of class (b), of course, depends in a large measure upon those of class (a) being correct and reliable. Another factor to be considered in estimating the annual cost of power in any particular case is the accuracy of the estimate of the amount of power that will be required. It will readily be realized that if the quantity of power consumed by a municipal corporation be greater or less than its estimated requirements, there will be a corresponding variation in the price payable for power, because in arriving at the estimated cost per horse-power the proportion of fixed charges and other elements of costs applicable to any municipal corporation is affected by the number of horse-power actually to be required.

In our reports upon the various systems and other undertakings of the Commission, we have dealt with certain estimates of both classes insofar as they relate to these individual undertakings. Many estimates prepared by the Commission have not been investigated by us, but those of both classes relating to the larger undertakings of the Commission have been examined and considered by our Consulting Engineer, Accountants and ourselves, and our conclusions in respect of several are summarized in the following sections.

Section 23

ESTIMATES OF CAPITAL COST

Cameron Falls Development (Thunder Bay System)

Our report entitled "Interim Report on Thunder Bay System" relates the circumstances under which the power development to serve the Cities of Port Arthur and Fort William was undertaken. The municipal corporations of these cities entered into agreements with the Commission under which they assumed liability for the cost of works to supply them with electrical power or energy. The representatives of the Commission, during negotiations with the municipal corporations which resulted in the agreements, and in public discussion, had announced that a water power privilege at Dog Lake would be utilized and the power required developed there at an estimated capital cost of $3,000,000.00. The Dog Lake Development was not proceeded with, but without consulting the municipal corporations interested and in total disregard of additional financial burdens to be cast upon such municipalities, the Commission commenced the construction of a much larger power plant at Cameron Falls on the Nipigon River, the

In our reports upon the various systems and water undertakings of the Dominion, we have dealt with certain questions of such classes insofar as they relate to these individual undertakings. Many questions pertaining to the Dominion have not been investigated by us, but those of both classes relating to the larger undertakings of the Dominion have been examined and considered by our Consulting Engineer, independently and separately, and our conclusions in respect of several are summarized in the following sections.

Section 24

Development of Hydro Power

Beaver Falls Development (Formerly Big Forest)

The report entitled "Interim Report on Chamber Bay Project" relates the circumstances under which the power development in Beaver Falls on Big Forest River and Big Falls was undertaken. The municipal corporations of these cities entered into agreements with the Dominion under which they assumed liability for the cost of works to supply them with electrical power or energy. The representatives of the Dominion, during negotiations with the municipal corporations which resulted in the agreements, and in public literature, had announced that a water power utilization at Big Falls would be utilized and the power required therefrom there at an estimated capital cost of $2,000,000.00. The Big Falls Development was not proceeded with, but without considering the municipal corporations interested and in total disregard of additional financial burdens to be cast upon such municipalities, the Dominion commenced the construction of a much larger power plant at Beaver Falls on the Nipigon River, the

outlet of Lake Nipigon. To October 31st, 1922, the expenditures by the Commission in connection with the cost of the Nipigon Development (Thunder Bay System) amounted to $6,642,770.13 and the Chief Engineer of the Commission has estimated the additional capital expenditure required to complete the development at $6,357,229.87, making a total capital investment of $13,000,000.00 or over four times the estimated cost of the Dog Lake Development. While it is highly probable that Cameron Falls was the better site for the development this does not justify the lack of frankness on the part of the Commission in its dealings with the municipalities.

The manner in which the work on the Cameron Falls plant was accomplished and the economy or otherwise in expenditures we have not an opportunity of investigating and we express no opinion thereon, but our inquiries have disclosed the fact that the expenditure of a sum so greatly in excess of that stated to the municipal corporations, which were assuming liability therefor, as being necessary, has occasioned great dissatisfaction and has placed upon the Province a burden never contemplated by the Government. This burden has been annually increasing and will continue to do so, until the Commission is able to find customers for the power available. The municipal corporation of Port Arthur has refused to pay "at cost" for the power supplied to it and the Commission has been unable to pay to the Province interest upon advances, the arrears of which to the end of 1923 we are informed amounted to $566,000.00. As stated in our report we have no doubt that this development will eventually be able to pay its way.

ceiled of less difficulty. In January 31st, 1912, the corporations by the Commission in conjunction with the aid of the Kilgour Development Company Ltd. Capital amounted to $4,841,777.12 and the Joint Delivery of the Commission has extended the additional capital expenditure required to complete the development at $4,827,[illegible],87, making a total capital investment of $[illegible] or very far since the estimated cost of the for this development. While it is highly probable that Cameron Falls was the better site for the development this does not justify the lack of foresight on the part of the Commission in its dealings with the municipalities.

The manner in which the work on the Cameron Falls plant was approached and the energy or enterprise in supplying so much as an opportunity of investigation and to adopt to explain themselves, the our investigation have disclosed the fact that the dependability of a man so greatly in excess of the stated to the municipal representatives, which were assuming liability therefor, or being necessary, the financial great disappointment and his plans upon the Trenton a matter were manipulated by the Government. This burden has been annually increasing and will continue to do so, until the Commission is able to find customers for the power available. The municipal corporations of Port Arthur has refused to pay "at cost" for the power supplied to it and the Commission has been unable to pay to the Trenton interest upon difference, the arrears of which to the end of 1917 we are informed amounted to $[illegible]. We stated in our report we have no doubt that this development will eventually be able to pay its way.

Sandwich, Windsor & Amherstburg Railway

As will be seen by our report relating to the above combined railway system acquired and operated by the Commission on behalf of a group of municipalities, the Commission expended on rehabilitation up to October 31st, 1922, the sum of $1,034,238.39, not including the amount of $55,051.19 expended to that date upon construction material not then used. The estimate prepared by the Commission, and submitted to the municipalities interested and to the Government of the cost of this rehabilitation, was $893,580.00.

The excess expenditure over estimated cost, was, therefore, $140,658.39 and apparently part of this amount was expended prior to any authority having been given to the Commission to expend on rehabilitation more than the proceeds from the sale of $900,000.00 of its bonds, which had been guaranteed by the Province. An over-run of 15% in work of this nature is not an unusual occurrence as there are many uncertainties.

Guelph Radial Railway

Under the heading of rehabilitation in our report entitled "Report on Guelph Radial Railway", we show that in a report prepared by the engineers of the Commission in November, 1919, the estimated expenditure required for rehabilitation was placed at $197,000. The actual expenditure for this purpose up to January 31st, 1923, amounted to approximately $265,700 so that the actual cost at that date exceeded the estimate by approximately $68,700 or 35%. While there is no doubt that in rehabilitating the railway, the Commission put the road in excellent shape resulting in a great improvement in both road-bed and equipment, the large increase in cost thus added considerably to

Capital Expenditure Policy

As will be seen by our report relating to the Grove Generating Station, which was received and approved by the Commission on behalf of a group of municipalities, the Commission expended on rehabilitation up to December 31st, 1947, the sum of $1,334,787.77, not including the amount of $24,221.12 expended to that date upon construction material not then used. The estimate prepared by the Commission, and submitted to the municipalities interested and to the Government of the Province of Ontario, was $800,000.00.

The excess expenditure over estimated cost, was, therefore, $534,787.77 and approximately part of this excess was expended prior to any authority being then given to the Commission to expend on rehabilitation more than the proceeds from the sale of $800,000.00 of its bonds, which had been guaranteed by the Province. An over-run of 100% in work of this nature is not an unusual occurrence as there are many uncertainties.

Grand Bridge Station

Under the heading of rehabilitation in our report entitled "Report on Grand Bridge Station", we note that in a report prepared by the engineers of the Commission in December, 1953, the estimated expenditure required for rehabilitation was placed at $[illegible]. The actual expenditure for this purpose up to January 31st, 1955, amounts to approximately $[illegible] so that the actual cost of that date exceeded the estimate by approximately $[illegible] or 80%. While there is no doubt that in rehabilitating the station, the Commission put the cost in excellent shape resulting in a good improvement in high road-bed and equipment, the large increase in cost that added considerably to

the annual carrying charges of the undertaking and these costs must necessarily add to the deficit which has accumulated.

Eugenia System

The Eugenia System includes a large development plant at Eugenia Falls which was constructed by the Commission to serve this system. We have not had an opportunity of investigating the estimates and costs of this work, but it was stated by witnesses appearing before us that the manner in which the Commission carried on the construction of certain of its transmission lines was very costly and that the work could have been carried out much more economically by the municipalities themselves. The following is an extract from our report on this system:

> "Mr. Legate's estimate of the saving that might be effected if the work of erecting transmission lines were done under the supervision of local engineers was vigorously disputed by the representatives of the Commission, and we did not go into the matter at sufficient length to justify us in making any findings on the particular questions at issue. In the construction of transmission lines there should always be full and cordial co-operation between the Commission and the several municipal corporations interested. In cases where the Commission finds that the work of constructing transmission lines can be done efficiently and economically by local engineers and their gangs, it would seem to be a wise policy to let them do the work under the direction of the Commission. If this were done the municipalities would have no ground for complaints as to costs, such as were made before us, and it would soon be known whether or not the statements made by Mr. Legate were well founded."

Rideau System

The development plant located at High Falls on the Mississippi River was constructed by the Commission during the post-war period. Authority to proceed with this work was obtained from the Government on the basis of a

the general energetic attempt of the municipalities and their owners generally and to the deficit which has accumulated.

Niagara System

The Niagara System includes a large development plant at Queenston. This was constructed by the Commission to serve this system. We have had no opportunity of investigating the estimates and costs of this work, but it was stated by witnesses appearing before us this too manner in which the Commission erred in the construction of certain of its transmission lines was very nearly and that the work could have been carried out much more economically by the municipalities themselves. The following is an extract from our report on this system:

"Mr. Lapointe's contention seems to be that right in principle if the work of erecting transmission lines were done under the supervision of local engineers was vigorously disputed by the representatives of the Commission, and we did not go into the matter at sufficient length to justify us in making any finding on the particular questions at issue. In the construction of transmission lines there should always be full and careful co-operation between the Commission and the several municipal corporations interested. In some cases the Commission feels that the work of constructing transmission lines can be done efficiently and economically by local engineers and their gangs, it would seem to be a wise policy to let them do the work under the direction of the Commission. If this were done the municipalities would have no reason for complaint as to costs, such as were made before us, and it would seem be known whether or not the statements made by Mr. Lapointe were well founded."

Ottawa System

The development plant located at High Falls on the Mississippi River was constructed by the Commission during the post-war period. Difficulty in connection with this work was obtained from the Government on the basis of a

letter dated June 26th, 1918, addressed to Sir William Hearst, by the Chairman of the Commission in which is contained the following information regarding the estimated cost of the High Falls Development:

> "The work contemplated consists of the complete development of the High Falls for 3,000 horse-power, and 22 miles of high tension line to Perth at a total estimated cost of $340,000."

Our report on the Rideau System shows that the investment in the High Falls Development as at October 31st, 1922, amounted to $696,055. The actual cost of this work, therefore, exceeded the estimate for it and the high tension line by more than 100%.

There is no record of the Commission ever having advised the Government that its estimate would be exceeded, nor is there any record of the Government having questioned the excess expenditure.

The importance to municipal corporations in the system of the excess expenditure upon the High Falls plant will be realized when it is considered that the rated capacity of the plant is 2800 horse-power and that an excess of cost of $356,000 represents an increase of capital cost per horse-power of over $127.00, and an increase in the annual cost of power at the point of generation of about $10.00 per horse-power.

The Ontario Power Company

In our report on The Ontario Power Company of Niagara Falls detailed reference is made to the estimated cost and actual cost of the construction of the Third Pipe Line which was undertaken by the Commission during the

Letters dated June 24th, 1910, addressed to the Prime Minister, by the Premier of the Dominion in which is contained the following interesting reference to the estimated cost of the High Falls Development:

> "The work contemplated consists of the complete development of the High Falls for 2,000 horse-power, and 12 miles of high tension line to Perth at a total estimated cost of $[illegible]."

Our report on the Ottawa River shows that the development of the High Falls development as at October 31st, 1913, amounted to $[illegible]. The actual cost of this work, however, exceeded the estimate for it and the high tension line by more than 100%.

There is no record of the Commission ever having advised the Government that its estimate could be exceeded, nor is there any record of the Government being greatly the worse acquainted.

The importance to municipal undertakings in the region of the Ottawa suggests that upon the High Falls plant will be realized when it is announced that the total capacity of the plant is 2000 horse-power and that an expense of about $[illegible] expenditure has therefore of capital 2-5 per horse-power of over $[illegible], and an increase in the annual cost of power at the point of generation of about $[illegible] per horse-power.

The Ontario Power Company

In our report on the Ontario Power Company at Niagara Falls considerable reference is made to the estimated cost and actual cost of the construction of the Eight Mile Lake which was commenced by the Commission during the

years 1918 and 1919. In that report, we show, that, according to the Minutes of the meeting of the directors of The Ontario Power Company held on December 20th, 1917, the Chief Engineer submitted a report which stated that an estimated expenditure of $1,806,000 in the construction of a wood stave pipe line would provide an additional 50,000 horse-power. Construction work was begun early in 1918 and completed in the spring of 1919. The total cost of the work was $3,514,676.62, or an increase over the estimated cost of almost 100%.

We set out in the report above referred to a series of twelve reasons given by the engineers of the Commission for the cause of the increased expenditure. In our analysis we point out that the original estimate was made before any detailed study of the project had been made. We further show that the great difference between the estimated cost and the actual cost was not alone due to changes in, and additions to, the design or to additions and contingencies that it was impossible to foresee or provide for, but to a large extent to the omission of important items and failure to provide for conditions and contingencies which should have been taken into account. As we state in our report: "There was no study of the cost such as would have been made by a contractor tendering to construct the work for a lump sum". We also show in our report, the percentage of overrun for the main items of the work. Amongst these items is one in respect of engineering expenses and interest which together amount to over $240,000, and which were entirely omitted from the estimates submitted.

Under authority of an Order-in-Council dated February 6th, 1918, the Commission obtained a loan from the Bank of Montreal of $1,250,000 to meet

years 1912 and 1913. In this report, re-hash, that, according to the minutes of the meeting of the directors of the Niagara Power Development Co. in January 1911, the Chief Engineer submitted a report which showed that an estimated expenditure of $3,900,000 in the construction of a canal along the Niagara River would provide an additional 40,000 horse-power. Construction work was begun early in 1912 and completed in the spring of 1913. The total cost of the work was $3,814,874.02, or an increase over the estimated cost of almost 100%.

We set out in the report above referred to a series of twelve reasons given by the engineers of the Commission for the amount of the additional expenditure. In our analysis we point out that the original estimate was made before any detailed study of the project had been made. We further show that the great difference between the estimated cost and the actual cost was not alone due to changes in, and additions to, the design of the plant and investigations that it was impossible to foresee or provide for, but it is fair to state as the reasons of important items and failure to provide for conditions and contingencies which should have been taken into account. As we state in our report, "There was no study of the work such as would have been made by a competent engineer to construct the work for a large sum". We also show in our report, the importance of correct for the main lines of the work. Changes these lines is due to changes of engineering engineers and increased which the yields should i. have $40,000, and which were entirely omitted from the estimates submitted.

Under authority of an Order-in-Council dated February 6th, 1913, the Commission obtained a loan from the Bank of Montreal of $1,000,000 to meet

in part the cost of this work. Instead of applying to the Government for additional funds to complete the work, the Commission, as pointed out in our report on the Central Ontario System and again in our report on The Ontario Power Company of Niagara Falls, used an amount of $1,700,000, which had been voted by the Legislature for construction of works in the Central Ontario System and which was held by the Commission as the Agent of the Government for this purpose, to complete the construction of the Third Pipe Line. In addition to displaying incomplete and incorrect knowledge of the cost of this work and want of candour in not informing the Government of the actual cost when it was in a position to ascertain same, the Commission committed an entirely unwarranted act in diverting, for this work, funds voted by the Legislature for other purposes entirely.

Queenston-Chippawa Power Development

A detailed account of all features of this Development is given in our report thereon submitted to Your Honour. In our investigations into this undertaking and our report thereon, special attention was paid to what we considered a prominent, and very important, feature of the Development, namely, the estimates of costs prepared, at different stages of the work, by or for the Commission and its course of procedure in respect thereof. We shall not here make any extended comments upon the subject so fully dealt with in the report mentioned, but desire to briefly summarize the conclusions reached by us.

After making due allowance for the magnitude and unique character of the work designed and carried out, and the very difficult war and after war

conditions prevailing at that time, our investigations have led us to the conclusion that the Commission and its engineers, in preparing the estimates, were far too optimistic, and that the estimates were in many respects strikingly inadequate. The management of the work of construction should never have been left in the hands of engineers already overburdened with other work, and without that wide experience in construction work of great magnitude that would have justified the Commission in placing the management in their hands.

Not only were the estimates, which were from time to time prepared and submitted or intimated to the Government, based upon unit costs which were far too low for certain important parts of the work, but they were also based upon under-estimated quantities. Ample opportunity was afforded for correction of previous estimates as the work progressed, and actual costs had been ascertained, but the Commission persisted in holding to its original estimates in many particulars, and in informing the Government on different occasions that the estimated cost would not be exceeded. To the end of the year 1919, the highest estimate acknowledged by the Commission and submitted to the Government for the work then contemplated was $24,000,000 to $25,000,000 which cost did not include the intake, the addition of which would bring the cost to between $26,000,000 and $27,000,000. Early in 1920 the Chief Engineer of the Commission informed Mr. Clarkson, who was then completing his audit of the accounts of the Commission for the fiscal year ending October 31st, 1919, that the cost would be about $40,000,000, an increase in prospective cost within a few months of $14,000,000. After the expiration of another

conditions prevailing at that time, our investigations have led us to the conclusion that the Commission and its engineers, in preparing the estimates, were for the epitaxis, and that the estimates were in many respects strikingly inadequate. The management of the work of construction would never have been left in the hands of engineers already overburdened with other work, and without the experience in construction work of great magnitude that would have justified the Commission in placing the management in their hands.

For only when the estimates, which were from time to time prepared and submitted or intended to the Government, based upon unit costs which were far too low for certain important parts of the work, but they were also based upon under-estimated quantities. Ample opportunity was afforded for correction of previous estimates as the work progressed, and actual costs had been ascertained, but the Commission persisted in holding to its original estimates in many particulars, and in intending the Government on different conclusions that the estimates must would not be exceeded. In the end of the year 1912, the slender estimate acknowledged by the Commission and submitted to the Government for the work then contemplated was $[illegible],000,000 to $[illegible],000,000 which must did not include the labour, the addition of which would bring the cost to between $[illegible],000,000 and $[illegible],000,000. Early in 1913 the Minister of the Commission informed Mr. Blackwood, who was then negotiating his audit of the accounts of the Commission for the fiscal year ending October 31st, 1912, that the cost would be about $[illegible],000,000, an increase in proportion cost within a few months of $[illegible],000,000. After the expiration of another

See Question Chittaw

six months, on the basis of a report of Mr. Stuart and Mr. Kerbaugh, the cost was fixed at about $50,000,000, a further increase of $10,000,000. The actual cost of the work for which these various estimates were given was over $64,000,000.

While we find that at least $12,000,000 of the difference between estimated and actual cost was unjustifiable, we also find, as already pointed out in our report dealing with this subject, that much of the remainder of the increase in expenditure was of a justifiable nature, brought on entirely by the abnormal conditions prevailing during the construction period, and for which adequate provision had not and to some extent could not have been made. About $7,000,000 is accounted for by reason of increased quantities and changes in design. The original estimate was too low by an amount of about $4,000,000 almost entirely on account of the fact that a grave error was made in assuming that the shovel equipment could do more than twice what it actually did. These matters were of a very serious character and failure to recognize and to openly acknowledge the mistakes that had been made had the effect of entirely misleading the Government, for as pointed out, the Commission continued to maintain to the end of 1919 that the original estimate submitted by it to the Government was entirely adequate.

It is quite clear that the estimate for this work submitted to the Government in 1917 was unsound in many respects, and it is clear that, aside altogether from the matter of increased quantities and changes in design, the cost of the work would have largely exceeded the estimate even if war conditions had not continued so long. It is unfortunate that the estimate was

six months, on the basis of a report of Mr. Stuart and Mr. Dyment, the sum was fixed at about $24,000,000, a further increase of $10,000,000. The actual cost of the work for which these various estimates were given was over $40,000,000.

Thus we find that at least $21,000,000 of the difference between estimated and actual cost was substantially, we also find, an already printed out in our report dealing with this subject, that much of the remainder of the increase in expenditure was of a justifiable nature, brought on entirely by the abnormal conditions prevailing during the construction period, and for which adequate provision had not and in some instances could not have been made. About $7,000,000 is accounted for by reason of increased quantities and changes in design. The original estimate was but for an output of about 2,000,000 horse power, or somewhat over the first plan a great error was made in assuming that the about development would be more than twice what it actually did. These matters were of a very serious character and relate to engineering and to speedy accomplishing the purpose that had been made had the effort of politically minded the department, for no pointed out, the Commissioner continued to maintain to the end of 1912 that the original estimate mentioned by it to the Government was entirely adequate.

It is quite clear that the estimate for this work submitted to the Government in 1907 was wrong in many respects, and it is also that only slightly from the matter of increased quantities and changes in design, the cost of the work would have largely exceeded the estimate even if all conditions had not continued as long. It is unfortunate that the estimate was

not submitted to consulting engineers at the time that it was submitted to the Government, instead of being submitted to them years afterwards. We have no doubt that if it had been submitted to them at that time, its inadequacy and the extreme optimism shown in its preparation would have been pointed out.

The matters just referred to are serious enough, but, as we have shown in our report, more serious still was the persistence of the Commission in continuing to use as a basis of conducting this work, the unsound and incorrect assumptions made in the original estimate, even though it must have known during the first year or two of the construction period that its expectations could never be realized. We refer particularly to the mistake made in over-estimating the capacity of the shovels. The shovels did less than half that which it was anticipated in the estimates they would do. This led to delays in the work which could have been almost entirely avoided had the Commission purchased additional construction plant as soon as it knew of its error. It was extremely dilatory, and it was not until late in 1920 and during the early part of 1921 that the additional equipment was procured. Extra men were then employed and the work put on a "rush schedule". Much of the additional equipment was used for only a few months. The rush schedule added anormously to the cost of the work without adding anything to its capacity. A conservative estimate of the unjustifiable excess cost directly chargeable to this procedure and other factors is approximately $12,000,000.

For a detailed statement showing how the additional cost was incurred we must refer you to our report thereon.

not admitted to committing negligence at the time that it was admitted in its investment, instead of being admitted in some years afterwards. We have no doubt that if it had been admitted in time as then was, the bankruptcy and the extreme opinions about in the preparation would have been avoided etc.

The matters just referred to are matters enough, but, as we have shown in our report, more serious still was the persistence of the Commission in maintaining to say as a matter of commonplace fair work, the wanton and inexcusable assumptions made in the original estimate, even though it must have become during the first year or two of the construction period that the expectations could never be realized. We refer particularly to the estimate made in over-estimating the capacity of the reservoir. The engineers did have then half that which it was anticipated in the estimates they would do. This led to delays in the work which could have been almost entirely avoided and the Commission purchased additional construction plant as soon as it was aware of its error. It was extremely timidly, and it was not until June in 1909 and during the early part of 1910 that the additional equipment was procured. Into men were then employed and the work put on a "rush schedule". Much of the additional equipment was used for only a few months. The work probably added immensely to the cost of the work without adding anything to its capacity. A conservative estimate of the unjustifiable extra cost directly chargeable to this procedure and other factors is approximately $50,000.

For a detailed statement showing how the additional cost accrued we must refer you to our report thereon.

This is a very striking example which shows the absolute necessity for estimates being prepared accurately, for incorrect estimates may not only be misleading as regards the question of finished cost, but inaccurate assumptions made in such estimates may lead to a combination of circumstances bringing about excess costs of a totally unwarranted character.

Niagara System

In our report on the Niagara System, we commented upon the discrepancy between the estimated and actual cost of a transmission line to the municipality of Dunnville. The amounts involved were comparatively small, but the difference between an estimated cost of $33,000 and an actual cost of $65,000 warranted the citizens of Dunnville in expressing dissatisfaction at the action of the Commission.

The increased capital cost of the transmission line increased greatly the cost of power to the Town of Dunnville, but the Commission appears to have been anything but frank with the town. In dealing with the matter of increases, Mr. Jeffrey admits that the Town of Dunnville was never advised of a change that was made in plans which in itself largely increased the estimate submitted. Mr. Jeffrey says:

> "We figured at that time that the change in the line from the pin type to the suspension type would cost approximately $17,000 and that of course would increase the cost of the power to Dunnville, and I suppose we should have gone to Dunnville and re-submitted the matter and told that we had to change the type of line and that would increase the cost of power to them."

This is a very striking example which shows the absurdity of estimates being prepared carelessly, for however estimates may and may be misleading as regards the quality of finished work, but inaccurate estimates such as that estimate may lead to a modification of circumstances which means such of a totally unwarranted character.

Niagara Falls:

In our report on the Niagara Falls, we commented upon the disparity between the estimated and actual cost of a transmission line to the municipality of Dunville. The amounts involved were comparatively small, but the difference between an estimated cost of $40,000 and an actual cost of $60,000 materiales the ability of Dunville to expensive administration on the action of the Commission.

The increased capital cost of the transmission line increased greatly the cost of power to the Town of Dunville, but the Commission appears to have been anything but frank with the town. In dealing with the matter of increase, Mr. Jeffrey admits that the Town of Dunville was never advised of a change that was made in plans which in itself largely increased the estimate submitted. Mr. Jeffrey says:

> "We figured at that time that the change in the line from the pole type to the suspension type would cost approximately $17,000 and that of course would increase the cost of the power to Dunville, and I suppose we should have gone to Dunville and re-submitted the matter and told them we had to change the type of line and that would increase the cost of power to them."

It would appear, therefore, that Dunnville had just cause for complaint. Under the original estimate, the rate was $27.50 per horse-power. It was, for 1922, $37.26. It was much higher but the rate was lowered owing to the reduction in renewal rates in December, 1922, to which reference has already been made. This case of the dissatisfaction expressed by the Town of Dunnville regarding estimates submitted to it, is the old story, told to us time after time by representatives of various Hydro Municipalities, of low estimates, and a high cost as compared with the estimates.

That the municipalities in the Province should have placed implicit confidence in the ability of the Commission is not strange, for every assurance has been given them by public utterances of the Chairman of the Commission and members of his staff that statements and figures submitted by them can be accepted at all times at their face value.

We quote hereunder a statement made by the Chairman of the Commission, as reported in the "Mail and Empire" of November 21st, 1907. This statement was made in the early days of the activities of the Commission and is typical of others that have appeared from time to time down to the present day:

> "I desire however, to point out and emphasize the fact that there is absolutely no risk, either to the Province or to the municipalities, that the actual cost of power will exceed the amounts set forth in the by-laws, as no contract will be entered into by the Commission for the supplying of power until, from tenders received for the construction of the

It would appear, therefore, that Danville had just cause for complaint. Under the original estimate, the rate was $25.00 per horse-power; it was, for 1888, $27.34. It was much higher but the rate was lowered owing to the reduction in renewal rates in January, 1889, to which reference has already been made. This case of the misapplication appeared by the time of Danville reporting estimates submitted to it, in the end study, half an hour after time by representatives of various Ontario municipalities, of low estimates, and a slip cost to accompany with the estimates.

Thus the municipalities in the Province should have placed implicit confidence in the ability of the commission in our attempt. The study conference has been given them by public statements of the Chairman of the Commission and members of his staff with statements and figures submitted by them can be accepted at all times at their face value.

In order determine a statement made by the Chairman of the Commission, as reported in the "Mail and Empire" of December 21st, 1907. This statement was made in the early days of the municipalities of the Commission and in spite of others that have appeared from time to time down to the present day:

> "I desire however, to point out and emphasize the fact that there is absolutely no risk, either to the Province or to the municipalities, that the actual cost of power will exceed the amounts set forth in the Schedule, as no contract will be entered into by the Commission for the supplying of power until, from further reviews for the determination of the

transmission lines, transformers and other appliances, the Commission has ascertained that the estimated cost of the work will not be exceeded."

That the Chairman of the Commission once had a very high regard for the necessity of the Commission making accurate and reliable estimates is evidenced by his answer to a delegate at the meeting at Galt in July, 1906, when he was promoting the scheme. At this meeting he was asked what would happen should a municipality accept the Commission's estimate and find afterwards that there had been a mistake he said:

"I think we would have to appoint another Commission."

In the case of Dunnville not only was the estimate wrong, but the Commission knowing it was wrong, failed to disclose the matter until the town was irrevocably committed.

We have referred to the Dunnville case because there was a special hearing in the case of that municipality and also because Mr. Jeffrey's statement, before quoted, sets forth in a few words what we believe to be the general attitude of the Commission in regard to estimates. Our investigation has shown that estimates are a very weak point in the administration of the Commission. Many of the estimates submitted to both the Government and the municipalities were apparently prepared without any sense of responsibility on the part of the Commission, and with the object of securing authority to proceed with the work rather than to give to the Government or the municipalities a clear idea of probable cost.

transmission lines, transformers and other appliances.
The Commission has ascertained that the estimates and of the work will not be exceeded."

That the Chairman of the Commission was not a very high regard for the ownership of the Ontario Hydro-Electric and reliable estimates is evidenced by his answer to a telegram at the meeting at Sault in July, 1921, when he was promoting the scheme. At this meeting he was asked that would happen should a municipality accept the Commission's estimate and find afterwards that there had been a mistake in order.

"I think we would have to appoint another Commission."

In the case of Dundalk not only was the estimate wrong, but the Commission knowing it was wrong, failed to disclose the matter until the town was irretrievably committed.

We have referred to the Dundalk case because there was a special hearing in the case of that municipality and also because Mr. Jeffrey's evidence, before Sutton, was given in a way which we believe is the general attitude of the Commission in regard to estimates. Our investigation has shown that estimates are a very weak point in the administration of the Commission. Many of the estimates submitted to both the Government and the municipalities were apparently prepared without any sense of responsibility on the part of the Commission, and with the object of securing authority to proceed with the work rather than to give to the Government or the municipalities a clear idea of probable cost.

Section 24

ESTIMATES OF POWER RATES

We have already pointed out that the price chargeable for power to municipal corporations which have entered into contracts with the Commission for a supply is, to a large extent, dependent upon the fixed charges in connection with capital investment in works, consisting of proportionate payments for interest, sinking fund and renewal reserves which together often total as much as eighty-five per cent. of the "cost of power", payable by these municipal corporations to the Commission.

The clear intention of The Power Commission Act was, and still is, unless amendments, to which we shall refer later, indicate a change of intention, that the electors of any municipality contemplating an agreement with the Commission for a supply of power shall have full opportunity of ascertaining the price to be paid before voting upon a by-law authorizing the execution of an agreement. The Act provided a simple and well-defined method of procedure. Any municipal corporation was privileged to apply to the Commission for a supply to it of electrical power or energy. The Commission was thereupon required to furnish to the corporation a statement of the maximum cost per horse-power at which the power would be supplied at the point of development or of its delivery to the Commission, and an estimate of the cost of a transmission line. The Council of the corporation might then enter into a provisional contract with the Commission, which contract was not to be binding upon the corporation until a by-law approving the same had

Article 4a

Application of Power Rates

We have already pointed out that the price charged for power to municipal corporations which have entered into contracts with the Commission for a supply is, in a large sense, dependent upon the final charge in conversion with capital investment in works, annualing of property-rate payments for interest, sinking fund and renewal reserves which together often total as much as eighty-five per cent. of the "cost of power", payable by these municipal corporations to the Commission.

The clear intention of the Power Commission Act was, and still is, which amendments, to enable municipal rates labor, include a charge of interest, that the electors of any municipality contemplating an agreement with the Commission for a supply of power shall have full opportunity of ascertaining the price to be paid before voting upon a by-law authorizing the execution of an agreement. The Act provided a simple and well-defined method of procedure. Any municipal corporation was privileged to apply to the Commission for a supply in it of electrical power or energy. The Commission was therefore required to furnish to the corporation a statement of the maximum cost per horse-power at which the power would be supplied at the point of development or at its delivery to the Commission, and at a minute of the cost of a transmission line. The Council of the corporation might then enter into a provisional contract with the Commission, which contract was not to be binding upon the corporation until a by-law approving the same had

received the assent of qualified electors. The estimates of the Commission or a summary thereof and a copy of the provisional contract were required to be published with or to form part of the by-law. After assent of the electors to execution of the contract by the corporation and approval of the Lieutenant-Governor in Council, the Commission was authorized to execute and carry out the contract, and to do all acts necessary for that purpose. The Province and the Commission were declared to be free of any liability by reason of any error or omission in any estimates, plans or specifications prepared or furnished by the Commission.

This course of procedure still forms part of The Power Commission Act and is set forth in Subsections (1) to (6) inclusive, of Section 18. In 1914, however, Subsection (7) was added as an amendment to Section 18. The history and effect of this amendment has been reviewed by our Legal Advisers in a report to us on "Legislation Affecting Power Undertakings of the Hydro-Electric Power Commission of Ontario", which has been transmitted by us to Your Honour. It appears that a section of The Power Commission Act, 1909, was passed to meet special circumstances which had arisen in connection with the contract between the Commission and the Corporations of Toronto, Hamilton and other municipalities for the supply of power from Niagara Falls. The object in view appears to have been to permit other municipal corporations in western Ontario, not parties to the contract but the electors of which had voted favourably upon a question submitted to them pursuant to the Municipal Amendment Act, 1903, as to the supply of electrical power from the Commission, to enter into contracts with the Commission in the form set forth in the schedule to the amending Act, without submitting a by-law approving the same for the assent of the electors.

repeated the answer of political electors. The estimates of the Commission or a summary thereof and a copy of the preliminary contracts were required to be published with or in advance of the by-law. After assent of the electors to execution of the contract by the corporation and approval of the Government, however in Council, the Commission was authorized to execute and carry out the contract, and to do all acts necessary for that purpose. The Province and the Commission were declared to be free of any liability by reason of any error or omission in any estimate, plans or specifications prepared or furnished by the Commission.

This system of procedure still forms part of the Power Commission Act and is set forth in Subsections (1) to (6) inclusive, of Section 18. In 1918, however, Subsection (7) was added as an amendment to Section 18. The history and effect of this amendment has been reviewed by our Legal Advisers in a report to us on "Legislation affecting Power Undertakings of the Hydro-Electric Power Commission of Ontario", which has been transmitted by us to Your Honour. It appears that a review of the Power Commission Act, 1919, was prompted by most careful circumstances which had arisen in connection with the contract between the Commission and the Corporation of Toronto, Municipal and other municipalities for the supply of power from Niagara falls. The object in view appears to have been to permit other municipal corporations in Western Ontario, not parties to the contract for the elections of which had raised intensely the question submitted to them pursuant to the Municipal Amendment Act, 1918, as to the supply of electrical power from the Commission, by entry into contracts with the Commission in the form set forth in the schedule to the amending Act, without submitting a by-law approving the same for the assent of the electors.

In 1914, the section of the Act of 1909, redrafted into a form to make it of general application was added as Subsection (7) to Section 18 of the general Act. The intention of the Commission, if not of the Legislature, is absolutely clear in procuring the enactment of this Subsection (7). It provided a simpler and more effective procedure for validation of contracts with municipal corporations, and avoided the necessity of publishing estimates of costs of power to them. It is not surprising that, as stated to us by Mr. Pope, Secretary of the Commission, the Commission adopted the policy of not publishing the estimates with the by-laws on the advice of Counsel. Although the Act relieved the Commission from liability for all error or omissions in its estimates, the removal of all causes of complaint on account of errors or omissions would commend itself to the Commission. It is, however, anomalous that there are two distinct courses of procedure in relation to contracts for the supply of power to municipal corporations in The Power Commission Act, one of which has become obsolete from non-use. It is to be noted also that in the opinion of our Legal Advisers, it is questionable if the method, now universally followed, is authorized.

From one point of view, it is immaterial whether or not the estimates of the Commission are brought to the knowledge of the electors of municipal corporations through publication thereof, as parts of by-laws, or as appears to be now usually done by informal and at time misleading or misunderstood statements by officers of the Commission. Formal contracts in which the maximum cost of power at point of delivery to the Commission is fixed are open to amendments by the Legislature on request of the Commission,

In 1924, the section of the act of 1920, referred into a form to mean if no general application was added as Subsection (7) to section 16 of the general act. The intention of the Commission, if not of the Legislature, is absolutely clear in promulgating the amendment of this Subsection (7). It provided a simple and more effective procedure for validation of securities with material irregularities, and removed the necessity of publishing estimates of costs of power to them. It is not surprising that, as stated in the Type, organizing of the Commission, the Commission adopted the policy of not publishing the estimates with the by-laws on the advice of Counsel. Although the act relieved the Commission from liability for all error or omissions in its estimates, the receipt of all manner of complaint on grounds of error or omissions would obviously fall on the Commission. It is, however, noticeable that there are two distinct courses of procedure in relation to customers for the supply of power to municipal corporations in the Power Commission Act, one of which has become obsolete from non-use. It is to be noted also that in the opinion of our legal advisers, it is questionable if the method, now universally followed, is authorized.

From one point of view, it is immaterial whether or not the estimates of the Commission are brought to the knowledge of the majority of municipal corporations through publication thereof, as parts of by-laws, or as appears to be now usually done by informal and at the minimum or misunderstood statements by officers of the Commission. Formal authority in which the matters and of power as point of delivery to the Commission is first sure to be answered, by the Legislature on requests of the Commission,

as was the contract of May, 1908, with municipal corporations of the Niagara System, when, by The Ontario Niagara Development Act of 1917, the provision in that contract determining the maximum cost as from nine to ten dollars per horse-power per annum according to the total quantity supplied, was amended and the municipal corporations were directed to pay the average cost to the Commission of power generated or purchased by it from plants at Niagara Falls or its vicinity.

The statements made by the Chairman of the Commission and quoted on pages 105 and 106 of this report, are far from being in accord with results. In our reports on all systems, we have included tables giving comparisons of estimates of cost of power, submitted by the Commission to the municipalities, with the actual cost to the municipalities. In a majority of the systems the actual cost has exceeded the estimated cost. In all but one of the municipalities composing the Eugenia System, the yearly average actual cost, before giving effect to the reduction in renewal charges, exceeded the estimated cost in varying degrees ranging from 1% to 187%. The actual cost to all municipal corporations of the St. Lawrence System, before reducing renewal charges, exceeded the estimated cost by from 31% to 141%. The excess in the case of the Thunder Bay System was great. In the Severn and Wasdell's Systems the excess was not as great as in others, but was appreciable.

The situation of the municipal corporations in the Niagara System has been indicated in our report thereon, and an analysis of estimates and actual costs shows that about 50% of the municipalities in the system are receiving their power at a rate equal to, or less than, estimated cost and

as was the contract of May, 1906, with municipal corporations of the Niagara System, which, by the Canada Electric Development Act of 1917, the provision in that contract determining the maximum rate or rate rise to ten dollars per horse-power per annum according to the total quantity supplied, was annulled and the municipal corporations were directed to pay the revenue cost to the Commission of power generated or purchased by it from plants at Niagara Falls or its vicinity.

The statements made by the Chairman of the Commission and quoted on pages 100 and 106 of this report, are far from being in accord with results. In our reports on all systems, we have included tables giving comparisons of estimates of cost of power, submitted by the Commission to the municipalities, with the actual cost to the municipalities. In a majority of the systems the actual cost far exceeded the estimated cost. In all but one of the municipalities comprising the Niagara System, the yearly average actual cost, before giving effect to the reduction in revenue charge, exceeded the estimated cost in varying degrees ranging from 1% to 187%. The actual cost to all municipal corporations of the St. Lawrence System, before crediting revenue charges, exceeded the estimated cost by from 41% to 141%. The excess in the case of the Thunder Bay System was great. In the Severn and Trenton Systems the excess was not as great as it should, but was appreciable.

The situation of the municipal corporations in the Niagara System has been indicated in our report thereon, and an analysis of estimates and actual costs shows that about 80% of the municipalities in the system are receiving their power at a rate equal to, or less than, estimated cost and

about 50% are paying more than estimated cost. The differences in this system are not nearly so great, however, as those encountered elsewhere and its situation in comparison with others may be considered a satisfactory one at the present time.

As before indicated, errors in estimates of the cost of power to a prospective customer may arise from a variety of causes, chief among these may be mentioned errors caused by incorrect estimates of capital cost of works, and incorrect assumptions with regard to the load that will be taken. We have definitely demonstrated that the Commission has frequently made serious errors in its estimates of capital cost, and this has resulted in incorrect estimates being submitted to municipalities covering their cost of power. The second cause for error, namely, that of incorrect assumption as to power loads, is also a most important matter. We find that the Commission has again and again greatly over-estimated the amount of power to be taken by a municipality, and as the power load regulates to a large extent the unit cost per horse-power, the municipalities in many cases have been totally misled regarding the price that they would have to pay.

The Commission has stated to us that one of the main reasons leading to the error made in assumed power loads, was on account of municipalities being over-optimistic as to the amount of power they could consume. This in no way relieves the Commission of responsibility in the matter, for the majority of municipalities throughout Ontario know little of such matters, and place entire reliance upon the guidance and judgment of the Commission

and its officials. We believe that it is the duty of the Commission to see that its estimates to the municipalities are based upon loads that may be definitely expected to obtain when the service is installed, and in actual operation. It is little or no comfort to a municipality to be told by the Commission, as many municipalities in Ontario have been told, that, if their load were three times as great as it actually is, the cost of power to them would not be greater than the estimated rate. It is the duty of the Commission to see that all municipalities are dealt with frankly and supplied with actual facts, and not with information based upon hypothetical conditions.

Section 25

CONSTRUCTION POLICY

After a thorough inspection and examination of the several parts of many of the works controlled and operated by the Commission, we came to the conclusion that in the design and construction of those erected by it or under its direction, the Commission had in view as its main objective, the installation of plant and equipment of such character and efficiency that operating difficulties would be reduced to a minimum and the durability and usefulness of the works for an extended period assured.

This was forcibly impressed upon us in comparing the development works at Ranney Falls with other plants in the Central Ontario district, which had been constructed by the company operating them prior to the purchase by the Province. The comments on this subject of our Consulting Engineer, from

and its officials. We believe that it is the duty of the Commission to see that its activities in the municipalities are based upon local need, particularly requested in cases where the service is installed, and is actual operation. It is little or no comfort to a municipality to be told by the Commission, as many municipalities in Ontario have been told, that, if only local area rates could be spread as it actually is, the cost of power to them would not be greater than the estimated rate. 1/ is the duty of the Commission to see that all municipalities are dealt with fairly and supplied with actual data, not just with information based upon hypothetical conditions.

Section IV

Conclusion

After a thorough inquiries and consideration of the several parts of many of the works constructed and operated by the Commission, we have to the conclusion that in the design and construction of these works by it or under its direction, the Commission had in view as the main objective, the installation of plant and equipment of such character and efficiency that operating difficulties would be reduced to a minimum and the durability and usefulness of the works for an extended period assured.

This was further improved upon in comparing the development work at Sandy Falls with other plants in the Central Ontario district, which had been constructed by the company operating them prior to the purchase by the Province. The remarks on this subject of the operating engineer, from

which we quote, express his, as well as our, views:

> "From a comparison of conditions at the various sites, and making allowance for the difference in head and in the constructional features, and for the dates of construction, it may be stated that the Ranney Falls plant could have been built at a somewhat smaller cost per horse-power than was actually the case. The Ranney Falls plant has features of design which undoubtedly are more expensive in capital cost than at many of the other plants. The reinforced concrete penstocks, the elaborate reinforced scroll cases for the turbines, and the reinforced concrete draft tubes, together with a number of the electrical features have all been designed and constructed having in mind very high grade construction and high efficiency in operating conditions. The policy of the engineers of the Hydro-Electric Power Commission apparently has been to develop this site for the maximum efficiency in operation and to place in the plant every feature making for absence of operating difficulties and tending to long useful life.
>
> "The other plants on the system were all designed by a private company, and bear evidence of the fact that the designers had primarily in mind a return on the invested capital in the form of dividends, as well as giving a good service to the customers served.
>
> "The above construction policy of the engineers of the Hydro-Electric Power Commission of Ontario seems also to have been applied in building the transformer stations and high tension transmission lines."

The Ranney Falls Development, being part of the Central Ontario System, was, of course, a Provincial undertaking, for the cost of which no municipal corporations had assumed any liability and it was to be expected that, as is usual with undertakings distinctly of a public character in which no class of the community is particularly concerned, the same regard was not paid to capital cost as might have been paid, were conditions different. The governing factor in this plant was the necessity of conserving to the fullest extent the water supply and much expenditure was made to attain this end.

Again we quote, express his, as well as our, views:

"Use a sequence of conditions at the various sites, and making allowance for the differences in head and in the hydraulical features, and for the dates of construction, it may be stated that the Queenston Chippawa plant has been built at a somewhat smaller cost per horse-power than was usually the case. The Queenston Chippawa plant has features of design which undoubtedly are more expensive in capital cost than at many of the other plants. The reinforced concrete penstocks, the elaborate reinforced concrete cases for the turbines, and the reinforced concrete draft tubes, together with a number of the electrical features are all more involved and consequently lending to cost very high construction and high efficiency in operating conditions. The policy of the engineers of the Hydro-Electric Power Commission apparently has been to develop this site for the maximum efficiency in operation and to place in the plant every feature making for economy of operating difficulties and lengthening of the useful life.

"The other plants of the system were all designed by a private company, and bear evidence of the fact that the designers had primarily in mind a return on the invested capital in the form of dividends, as well as giving good service to the customers served.

"The state constructive policy of the engineers of the Hydro-Electric Power Commission of Ontario seems also to have been applied in building the transformer stations and high tension transmission lines."

The Queenston Chippawa Development, being part of the Ontario Hydro System, was, of course, a Provincial undertaking, the first of which as municipal corporations had assumed any liability and it was to be expected that, as is usual with undertakings distinctly of a public character in which the majority in particularly concerned, the same effort was not laid to capital cost as might have been paid, were conditions different. The governing factor in this plant was the necessity of conveying to the Niagara Peninsula water supply and much experience was made in which this had.

The design and construction of other works of the Commission and notably the Queenston-Chippawa Power Development, display a nicety and perfection beyond criticism. The development works at Cameron Falls, Thunder Bay System, are of the highest order. The high standard set in the aforementioned cases was not maintained to the same degree in the cases of the development at High Falls, Eugenia Falls and Wasdell's Falls, but even those compare favourably as to design and construction with plants of private corporations or others. In the rehabilitation of the Sandwich, Windsor and Amherstburg Railway, and the Windsor and Tecumseh Electric Railway, and the Guelph Radial Railway, the workmanship and material were of the highest class and conducive to permanence and to facility of operation.

No reasonable objection can be made to the Commission providing works of a standard of efficiency and permanence not employed elsewhere, but there is a point at which extra cost for elaborate design and workmanship becomes extravagance and is unjustifiable.

The Commission has constructed practically all the more important development works with its own construction staff. We have, in former reports and particularly in that upon the Queenston-Chippawa Power Development, expressed our opinion that the Province and contracting municipal corporations would be better served were the Commission to devote its present organisation's time and energies to duties other than those relating to construction work of magnitude.

The design and construction of other works of the Commission and notably the Jawahir-Ghawan Power Development, display a clarity and perfection beyond criticism. The development works at Chamera Dam, Thunder Bay System, one of the biggest ever, The high standard set in the administrative sphere was maintained to the same degree in the areas of the development of Jaja Dalia, Bagaria Dalia and Chandil's Dalia, but even there engineers forecastingly as to design was considerable with plants of private enterprises in charge. In the rehabilitation of the Damodar, Chakur and Mayurakshy Delivery, and the Pilanor and Tonnada Electric Railway, and the Durgapur Dalia Delivery, the workmanship and material were of the highest class and necessary to guarantee and to facility of operation.

In conclusion, it may be said, in the Damodar Valley Project, there is a standard of efficiency and promptness and original planning, but there is a point at which even that for elaborate design and workmanship becomes extravagant and is unjustifiable.

The Commission has concentrated practically all its work upon development works with its own administration staff. In Java, in Ceylon, in Burma and particularly in that upon the Damodar-Ghawan Power Development, one passed our opinion that the previous and contributing municipal corporations would be better served were the Commission to devote its power organization's time and energies to doing other than taking in construction work of engineering.

In that part of our report on the Queenston-Chippawa Power Development dealing with construction procedure and management, we have not adversely criticized the Commission for deciding to conduct directly, construction operations. As we have pointed out, it would have been impossible to obtain a firm bid from any contracting organization for doing this work, and had the work been let under any form of contract other than the straight cost plus a percentage basis, the enormous increase in labour and material costs during 1919 and 1920 might have resulted in financial ruin to the contractor, with the result that the Commission would have had to finish the work with its own force. We are, however, firmly of the opinion that having decided to construct the work itself, the Commission was seriously at fault in not creating a separate construction department under the direction of a qualified manager of construction. The facts supporting our view in this connection will be found in our detailed report on the Queenston-Chippawa Power Development, and it would be impossible at this place to give even the briefest summary of the salient features.

The foregoing review leads naturally to the question as to what procedure should be followed by the Commission in the future in reference to the method of constructing its works. There is much to be said in favour of the view held by those in a position to know that public or semi-public work is subject to inherent handicaps and difficulties almost impossible to overcome when construction is done on a force account basis, instead of on a contract basis. Certainly this is so, when the work is not under the manage-

In this part of our report on the Niagara-Dundas Power Development dealing with construction procedure and management, we have not absolutely restricted the Commission for deciding on certain diversity, construction questions. As we have pointed out, it would have been impossible to obtain a firm bid from any contracting organization for either this work, and had the work been let under any form of contract they have the straight cost plus a percentage basis, the correct balance in labour and material costs during 1919 and 1920 might have resulted in financial ruin to the contractor, with the result that the Commission would have had to finish the work at its own cost. We are, however, firmly of the opinion that having obtained a contractor the work itself, the Commission was entirely at fault in not creating a separate construction department under the direction of a qualified manager of constructions. The basis supporting our view in this connection will be found in our detailed report on the Queenston-Chippewa Power Development, and it would be impossible at this place to give even the briefest summary of the salient features.

The foregoing review leads naturally to the question as to what procedure should be followed by the Commission in the future in returning to the method of constructing its works. There is much to be said in favour of the view held by those in a position to know that public or semi-public work is subject to innumerous handicaps and difficulties almost impossible to overcome when construction is done on a force account basis, instead of on a contract basis. Certainly this is so, when the work is not under the manage-

ment and control of men especially qualified in such matters. Even under normal conditions, circumstances may be such as to make it desirable and expedient that work be conducted on a force account basis, but in such an event we believe that our recommendations with respect to a separate construction organization would bring the best results.

Since the moneys necessary in the construction of large developments must be advanced by the Province, the interests of the Province must be protected to the greatest extent possible. Then there is much to be said in favour of having future works constructed on a contract basis. If this were done, the Government would know as nearly as possible when authorizing a work what the cost would be. The Commission would then assume the role of supervisor through the agency of its engineering staff.

men and control of men especially qualified to work matters. Two major general conditions, circumstances may be such as to make it desirable and expedient that work be undertaken on a large amount basis, but it may be argued that our preconceptions with respect to a separate constitutional organization would bring the best results.

Since the money necessary in the construction of large developments must be borrowed by the District, the interests of the District must be protected to the greatest extent possible. Then there is much to be said in favor of having first work constructed on a minimum basis; if this were done, the investment would come as nearly as possible when matching a with what the user would be. The Commission would then assume the role of supervisor, adopting the country of its maintenance staff.

PART VII - APPROPRIATIONS

Section 26

METHOD OF OBTAINING FUNDS

In order that the Commission might have funds to meet the cost of works and other outlays to be made by it in connection with the supply of electrical power or energy to municipal corporations and others, the original Power Commission Act of 1906 provided that the Lieutenant-Governor in Council might from time to time raise by way of loan in the manner provided by the Provincial Loans Act such sums as the Lieutenant-Governor in Council might deem requisite for the purposes of the Act, and that such sums might be paid over to the Commission and should be accounted for and audited in the manner provided with respect to the management of the public revenue and public accounts.

This source of supply of funds is still available under the Act as it is at present, and prior to 1916 was the sole source from which moneys could be obtained for purposes of the Commission. In 1917, and subsequent years amendments to the Act and the enactment of other Statutes authorized other means of financing the undertakings of the Commission.

The procedure laid down by the Act of 1906, and still applicable, has never been strictly followed. It has not been the practice for the Lieutenant-Governor in Council from time to time to raise by way of loan specific sums for the purposes of the Act and to pay such sums over to the Commission. Annual appropriations were voted by the Legislature for purposes

PART VII - APPRENTICESHIP

Section 38

METHOD OF INSTITUTING WORK

In order that the Commission might have funds to meet the cost of works and other outlays to be made by it in connection with the supply of electrical power or energy to municipal corporations and others, the original Power Commission Act of 1906 provided that the Lieutenant-Governor in Council might from time to time make by way of loan to the Commission provided by the Provincial Income Act such sums as the Lieutenant-Governor in Council might deem requisite for the purposes of the Act, and that such sums might be paid over to the Commission out of Consolidated Revenue Fund and applied in the manner provided with respect to the management of the public revenue and public accounts.

This source of supply of funds is still available under the Act as it is at present, and prior to 1918 was the main source from which moneys could be obtained for purposes of the Commission. In 1917, and subsequent years moneys to the Act and the amendment of other Statutes authorized other means of financing the undertakings of the Commission.

The procedure laid down by the Act of 1906, and still applicable, has never been strictly followed. It has not been the practice for the Lieutenant-Governor in Council from time to time to make by way of loan specific sums for the purposes of the Act and to pay such sums over to the Commission. Annual appropriations were voted by the Legislature for purposes

of the Act and these have been drawn upon by the Commission as required, and paid out of funds in the hands of the Province obtained from the proceeds of Provincial loans for general purposes. Prior to 1917, the Commission furnished to the Government a statement of the amount required for its purposes for the ensuing year without furnishing particulars of the amounts required for its different undertakings, and the sum asked for was voted by the Legislature. In 1917 and subsequent years when appropriations were voted, definite amounts were allocated to the several purposes for which they were asked by the Commission. The Ontario Niagara Development Act, 1916, shows the first departure from the original method of providing funds for any undertaking under the control of the Commission, and definitely provided that the cost of the works constructed or acquired under it should be met by appropriations by the Legislature.

In 1917, 1918 and 1920, substantial changes were made in the provisions of The Power Commission Act relating to financial transactions of the Commission. Under the amending Acts of these years and under The Ontario Niagara Development Act, 1917, the Commission obtained greatly extended powers, and there was cast upon the Province responsibility and liability, limited, not by the will and vote of the Legislature, but at the discretion of the Lieutenant-Governor in Council. By The Power Commission Act, 1917, and by The Ontario Niagara Development Act, 1917, the Commission was authorized, upon the authority of the Lieutenant-Governor in Council, to issue bonds or other securities for any purpose within its jurisdiction, and to enter into any contract or agreement in connection with the acquisition of

of the Act and these have been drawn upon by the Commission as required, and paid out of funds in the hands of the trustees obtained from the proceeds of Provincial loans for general purposes. Prior to 1917, the Commission furnished to the Government a statement of the amount required for its purposes for the ensuing year without furnishing particulars of the amounts required for its different undertakings, and this was asked for and voted by the Legislature. In 1917 and subsequent years when appropriations were voted, details amounts were allocated to the several purposes for which they were asked by the Commission. The Ontario Hydro Development Act, 1914, above the first Schedule from the original method of providing funds for any undertaking under the control of the Commission, was satisfactorily provided that the act of the owner constructed on required water is should be met by appropriations by the Legislature.

In 1917, 1918 and 1919, substantial changes were made in the provisions of the Power Commission Act relating to financial transactions of the Commission. Under the amending Acts of these years and under the Ontario Hydro Development Act, 1917, the Commission obtained greatly extended powers, and there was put upon the Province responsibility and liability, limited, not by the will and vote of the Legislature, but at the discretion of the Lieutenant-Governor in Council. By the Power Commission Act, 1917, and by the Ontario Hydro Development Act, 1917, the Commission was authorized, upon the authority of the Lieutenant-Governor in Council, to issue bonds or other securities for any purpose within its jurisdiction, and to order into any amount or expenses in connection with the operations of

any shares of any company and assume the obligations of such company. The Lieutenant-Governor in Council was authorized to guarantee the bonds and performance of the covenants of the Commission.

By The Power Commission Act, 1918, the Commission was authorized, upon the authority of the Lieutenant-Governor in Council, to borrow money for its purposes and issue its bonds, debentures and other securities therefor and the Lieutenant-Governor in Council was authorized to guarantee the repayment of loans negotiated by the Commission from banks, or any other indebtedness incurred by the Commission to any extent.

The Power Commission Act of 1920 authorizes the Lieutenant-Governor in Council to issue special warrants for payment of moneys to the Commission where an appropriation made by the Legislature for any work of the Commission has become exhausted in any fiscal year, and the Chairman reports that it is necessary and expedient that such work shall be proceeded with, and that an additional amount is required for that purpose.

As has been previously stated by us this amendment of 1920 to The Power Commission Act was not expressly made applicable to works being constructed under The Ontario Niagara Development Act, but it was so applied and advances made for the Queenston-Chippawa Power Development which were not covered by appropriations voted by the Legislature.

In effect, under present conditions, appropriations voted by the Legislature for purposes of the Commission are no index of the amount that will be expended by the Commission or advanced by the Province, nor of the liabilities

any share of our energy and assume the obligations of such company. The Lieutenant-Governor in Council was delighted to guarantee the bonds and performance of the agreements of the Commission.

By the Power Commission Act, 1921, the Commission was authorized, upon the authority of the Lieutenant-Governor in Council, to borrow money for its purposes and issue its bonds, debentures and other securities therefor and the Lieutenant-Governor in Council was authorized to guarantee the payment of loans negotiated by the Commission from banks, or any other indebtedness incurred by the Commission to any extent.

The Power Commission Act of 1922 authorizes the Lieutenant-Governor in Council to have special surveys or studies in the Commission carried on appropriation made by the Legislature for any work or for the Commission has been undertaken in any fiscal year, but the Commission reports that it is necessary and expedient that work should be proceeded with, and that an additional amount is required for that purpose.

In the same previously stated by an Act's enactment of 1923 the Power Commission Act was not expressly made applicable to works being constructed under the Ontario Hydro-Electric Development Act, but it was an explicit and express made for the Niagara-Niagara Power Development which was surveyed by appropriations voted by the Legislature.

In effect, under present conditions, appropriations voted by the Legislature for purposes of the Commission are no index of the amount that will be expended by the Commission or advanced by the Province, nor of the liabilities

that will be assumed by the Commission and guaranteed by the Province in the current or ensuing fiscal year. The Legislature and the people of the Province must rely on the assurances of the Commission that some day in some way Provincial advances will be repaid and Provincial liabilities released. Statutory amendments regarding the methods of obtaining funds for the purposes of the Commission have resulted in a very wide departure from the principle of Legislative control of, and responsibility for, all expenditures of Provincial moneys.

Section 27

EXPENDITURES IN EXCESS OF APPROPRIATIONS AND DIVERSION OF APPROPRIATIONS

Since 1917, the appropriations of the Legislature have not been voted in a lump sum, but have been earmarked for specific works pursuant to estimates submitted by the Commission. It appears from the report of our Accountants that the Commission has never considered it a matter of special importance that the annual expenditures on a specific work should not exceed the appropriations or the advances in respect of the appropriations for the purposes of that work. For example, an appropriation has been voted by the Legislature for the Queenston-Chippawa Power Development in each year since 1917, yet prior to 1922 the expenditures made by the Commission for Queenston-Chippawa regularly exceeded the advances. Full details of the manner in which advances were exceeded may be obtained by referring to our report on the Queenston-Chippawa Power Development, but we would here point out certain of the outstanding facts in connection therewith.

that will be warmed by the Commission and guaranteed by the Province in the matter of sending final year. The Legislature and the people of the Province must rely on the assurances of the Commission that some day in some way financial advance will be repaid and territorial liabilities released. Starting assessments regarding the methods of obtaining funds for the purposes of the Commission have evoking in a very wide departure from the principle of Legislative control of, and responsibility for, all expenditures of Provincial moneys.

Section 27

INSTRUCTIONS TO BOARD OF ADJUDICATION AND REPORTING OF INVESTIGATIONS.

Since 1917, the appropriations of the Legislature have not been voted in a lump sum, but have been earmarked for specific works previous to estimates submitted by the Commission. It appears from the report of our Accountants that the Commission has never considered it a matter of special importance that the annual expenditures on a specific work should not exceed the appropriations or the estimates in respect of the appropriations for the purposes of that work. For example, no appropriation has been voted by the Legislature for the Queenston-Chippawa Power Development in each year since 1917, yet prior to 1921 the expenditures made by the Commission for Queenston-Chippawa regularly exceeded the advances. Full details of the manner in which advances were exceeded may be obtained by referring to our report on the Queenston-Chippawa Power Development, but we would here point out portions of the outstanding facts in connection therewith.

During the five-year period ending October 31st, 1921, the Province had advanced in respect of appropriations, $53,040,674, and the Commission expended over $58,000,000 upon the Queenston-Chippawa Power Development. The balance of about $5,000,000 was, in the words of Mr. Clarkson:

> "applied out of moneys advanced by the Province to the Commission for the purpose of other systems to the extent of $4,806,215 and out of renewal and reserve funds belonging to the Niagara System to the extent of $171,476.00."

As at October 31st, 1922, the advances totalled $61,278,545.00 and the expenditures totalled $65,642,615.00.

Although expenditures have exceeded advances in respect of appropriations for many other works of the Commission, the Queenston-Chippawa Power Development has been used as an illustration because it is being constructed under the provision of the Development Acts, or in other words The Ontario Niagara Development Acts of 1916 and 1917, which specifically provide that "the cost of the construction... of the works... shall be defrayed out of such money as may, from time to time, be appropriated by the Legislature for that purpose".

In our report upon The Ontario Power Company, we have described the manner in which the Commission financed the construction of the Third Pipe Line. No appropriation in respect of this work was voted, but under authority of an Order-in-Council, a loan of $1,250,000 was obtained from the Bank of Montreal. The estimated cost was $1,806,000, the actual cost exceeded $3,500,000. The Commission did not apply to the Legislature for any appropria-

tion or to the Government for a guarantee of an additional loan. In our report on The Ontario Power Company, we say:

> "... there was lying in the hands of the Commission $1,700,000 which had been voted by the Legislature for construction of works in the Central Ontario System and which was held by the Commission as the agent of the Government. Without any authority from the Government or the Legislature the Commission took this sum and used it to complete the construction of the third pipe line. This was later paid back out of appropriations for the Niagara System."

This matter is referred to in several of Mr. Clarkson's reports and we draw attention to his comment in our report entitled "Examination of Auditor's Reports for period 1916-1921 inclusive". In that report we state:

> "It is clear that the action taken by the Commission in diverting funds voted for Central Ontario, for works in systems operated by it under The Power Commission Act, was wholly unwarranted, and the Auditor was fully justified in bringing the matter year after year to the attention of the Government of the day. The action taken by the Commission in diverting funds was never approved by the Legislature."

Again in our report on the Central Ontario System, we point out that the money voted by the Legislature for this system, was diverted by the Commission and expended, not on property directly purchased by the Province, but on plants throughout Ontario that were constructed or acquired and were being operated by the Commission under the provisions of The Power Commission Act.

In his 1919 report, Mr. Clarkson shows that for the fiscal year ending October 31st, 1919, the Commission made requisition upon, and obtained

tion or in the Hansard for a quotation of an editorial item. In one report on The Ontario Power Company, we read:

> "... Large sums lying in the bank of the Commission (2,790,000 which has been voted by the Legislature for construction of works in the Central Ontario area and which was held by the Commission at the request of the Government. Without any authority from the Government or the Legislature the Commission used this sum and used it to complete the construction of the third pipe line. This was before plans had been set of appropriations for the Niagara System."

This matter is referred to in several of Mr. Gibson's reports and we draw attention to his comment in our report entitled "Commission of Enquiry's reports for period 1922-1923 inclusive". In that report he says:

> "It is clear that the action taken by the Commission in diverting funds voted for Central Ontario, for works in Niagara authorized by it under the Power Commission Act, was wholly unwarranted, and the matter was fully justified in bringing the matter year after year to the attention of the Government of the day. The motion taken by the Commission in diverting funds was never approved by the Legislature."

Again in our report on the Central Ontario System, we point out that the money voted by the Legislature for this system, was diverted by the Commission and expended, not on property directly purchased by the System, but on plants belonging to other companies which had been amalgamated or acquired and were being operated by the Commission under the provisions of the Power Commission Act.

In his 1929 report, Mr. Gibson shows that for the fiscal year ending October 31st, 1929, the Commission made expenditures from, and returned

from, the Province the whole of the moneys included in the estimate voted for that period, and that after expenditures of portions thereof for the specific purposes for which they were voted, there remained in its hands a total of over $3,000,000 which it expended on other systems in excess of appropriations provided therefor.

In the same report, Mr. Clarkson makes a statement which shows that the Commission was lax in not exercising definite control over expenditures, for he says:

> "It is apparent that the members of the Commission - of themselves - were not fully seized of the extents by which appropriations were being exceeded or moneys being expended for purposes other than those for which appropriations had been asked. With the matter drawn to their attention, steps have been taken to keep expenditures within appropriations."

Perhaps the most glaring instance of misappropriation of funds is found in the action taken by the Commission when, in the year 1920, the sum of over $1,000,000, which had been obtained for expenditures on systems and other duly authorized purposes, was expended by the Commission in connection with Hydro-Electric Radial Railways, for which no appropriations whatsoever had ever been made.

During the period from 1918 to October 31st, 1922, the Province advanced the Commission $8,453,695.27 for the Thunder Bay System, while during the same period the Commission expended on this system $6,533,331.96 or $1,920,363.31 less than the amount advanced by the Province. The difference between these two sums was used by the Commission without authority, and apparently without the knowledge of the Government, on other undertakings in

from, the Province the whole of the energy included in the estimate voted for that period, and that after expenditures of portions thereof for the specific purposes for which they were voted, there remained in its hands a total of over $2,000,000 which it proposes to other purposes in excess of appropriations provided therefor.

In the same report, Mr. Ellerman makes a statement which shows that the Commission was low in its accounting activity during your administration, for he says:

> "It is apparent that the members of the Commission - or Commissioners - were not fully seized of the extents to which appropriations were being exceeded or moneys being expended for purposes other than those for which appropriations had been asked. With the matter drawn to their attention, steps were then taken to come completely within appropriations."

Perhaps the most glaring instance of disappropriation of funds in excess in the action taken by the Commission when, in the year 1917, the sum of over $2,000,000, which had been obtained for expenditure on power and other duly authorized purposes, was expended by the Commission in connection with Queen-Victoria Saint Lawrence, for which no appropriation was ever had over been made.

During the period from 1916 to October 31st, 1920, the Province advanced the Commission $2,400,000.00 for its Toronto Hydro System, while during the same period the Commission expended on this system $3,300,000.00 or $2,300,000.00 less than the amount advanced by the Province. The difference between these two sums was used by the Commission without authority, and apparently without the knowledge of the Government, on other undertakings in

excess of the amounts advanced therefor by the Province. This diversion was only one of many, and shows how little control the Government had over the expenditures of the Commission and how little regard the Commission paid to the special trusts upon which it received the moneys.

Employment of Reserves on Capital Account

The Commission has not only misapplied specific advances from the Province, but it has employed its renewal and other reserve funds on capital account, often upon works of systems other than those in respect of which they were established. For example, the Essex System was purchased by the Commission with the approval of the Government in 1918. It is not a system within the meaning of The Power Commission Act. To quote from the 1921 report of Mr. Clarkson, at page 63:

> "To October 31, 1920, the Commission had advanced $149,516.68 to the Essex System out of renewal and other reserve funds held by it to the credit of other power systems; in the fiscal year ending October 31, 1921, such advances were reduced by $22,375.34 leaving a balance still owing as of date October 31, 1921, of $127,141.34."

The renewal reserves of the Commission have also been employed from time to time in the construction of the Queenston-Chippawa Power Development.

We quote the concluding paragraph of our report on the Severn System:

> "The expenditures made by the Commission in purchase of the properties of the Simcoe Railway & Power Company and upon extension of the Big Chute plant and for transmission lines do not appear to have been provided for by appropriations specifically made therefor or in general appropriations applicable thereto, and were presumably made from the general

areas of the amounts advanced therefor by the Dominion. This situation was only one of many, and shows how little control the Government had over the expenditures of the Dominion and how little regard the Dominion paid to the special trusts upon which it received the moneys.

Maintenance of Reserves on Original Accounts

The Dominion has not only disregarded specific advances from the Provinces, but it has neglected its renewal and labor reserve funds on capital accounts, after upon works of systems which there is request of which they were established. For example, the Sault System was purchased by the Dominion with the approval of the Government in 1918. It is not a system which the Dominion of the Dominion Constitution. In quote from the 1921 report of Mr. Ellerman, on page 61:

> "On October 31, 1920, the Dominion had expended $10,311.63 on the Sault System out of renewal and other reserve funds held by it in the hands of other power systems; in the first year ending October 31, 1921, such advances were reduced by $22,874.50 leaving a balance still owing as at Sale October 31, 1921, of $12,437,141.34."

The renewal reserve of the Dominion have also been employed from time to time in the construction of the Dominion-Ontario Power Development.

We quote the concluding paragraph of our report on the Sault System:

> "The expenditures made by the Dominion in purchase of the properties of the Sault Ontario Power Company and from estimates of the Big Chute plant and for transmission lines do not appear to have been justified nor by departmental practically made whether or in general appropriations applicable thereto, and were personally made from the general

fund' of the Commission and moneys therein derived from sources and for purposes unconnected with the Severn System. The diversion of funds in the hands of the Commission for one purpose, from that to another is, in our opinion, not only unwise, but also improper and unwarranted."

Diversion of Funds for Unauthorized Purposes

Not only has the Commission frequently expended sums on specific works in excess of the advances in respect of appropriations therefor, either by way of employment of funds appropriated for other purposes or the reserve or other funds of the Commission not properly applied on capital account, but it has frequently incurred heavy expenditures in respect of works for which there was not and never had been any appropriation or advance by the Province. We have submitted a special report entitled "Hydro-Electric Radial Railways" which serves as an excellent illustration of the diversion of funds to unauthorized expenditures.

The total diversion for Hydro-Electric Radial Railway purposes to the end of the fiscal year, 1922, was approximately $1,109,000. Although this represented the greatest diversion, numerous other examples might be cited: $11,000 was disbursed to finance what is properly known as the Radial Campaign prior to the annual municipal elections of January 1923; a very considerable sum was used in connection with farming operations on land purchased for the purpose of the Queenston-Chippawa Power Development; the use of Power Commission funds temporarily in the construction of the London and Port Stanley Railway was absolutely unauthorized; and all the preliminary expenses incurred in the purchase of the Sandwich, Windsor and Amherstburg Railway were met out of the General Fund of the Commission without a shadow of authority.

(1)
(2)
(3)

that' of the Constitution authorizes Congress to dispose of territory, rivers, harbors and for purposes unconnected with the General Government. The distribution of money in the hands of the states, whether for one purpose, from that to another is, in our opinion, not only unwise, but also improper and unauthorized."

Diversion of Funds for Unauthorized Purposes

Not only has the Constitution frequently required some co-operation in excess of the advances in respect of appropriations therefor, either by way of acceptance of funds contributed by state authorities or the receipt of the Constitution has generally implied an explicit mandate, but it has frequently imposed heavy requirements in respect of ways for which there was not merely but been any appropriation or grants by the Province. We have submitted a partial list of the "Ontario-Quebec Radio Railway" which serves as an excellent illustration of the diversion of funds to unauthorized expenditures.

The total diversion for Ontario-Quebec Radio Railway purposes on the eve of the fiscal year, 1928, was approximately $1,[illegible]. Although this represented the greatest diversion, numerous other examples might be cited. [illegible] was diverted in Ottawa which is properly known as the Dominion prize in the annual municipal elections of January 1928; a very profitable sum was used in connection with drainage operations on land purchased for the purpose of the Dominion-Ontario Drainage Commission, the [illegible] of Ontario Constitution funds improperly in the repatriation of the Ontario Government Pari Mutuel Lottery was illegally expropriated and all the provincial expenses incurred in the purchase of the Ontario, Quebec and Dominion Railway were met out of the General Fund of the Government without a shadow of authority.

Special attention is directed to Exhibit IIIc to IIIf, inclusive, of Price, Waterhouse & Co.'s report entitled "General Report on Investigation of Financial Accounts", dated January 26th, 1923. These exhibits show appropriations, cash advances, expenditures, the amounts over or underexpended, and funds borrowed from outside sources for each of the years from 1918 to 1921, inclusive. In these Exhibits, the general practice of the Commission to employ funds appropriated by the Legislature for specific purposes on works other than in respect of which they were appropriated is clearly shown.

General

The practice of the Commission in exceeding the Legislative appropriations, diverting funds specifically voted for one purpose and employing them for another purpose, and using funds specially intended and voted for one purpose on wholly unauthorized work, shows a total disregard of its duties and obligations. It has been claimed many times that war conditions justified this practice. They did not justify it, but, as we have already pointed out in another report, diversions, in many instances, were made to a greater extent after the war than during its progress.

The Commission and especially the Chairman of the Commission has habitually shown an impatience of Statutory restraints and a disregard of Statutory obligations. If the Government did not give the Commission what it wanted, when it wanted it, the Commission did not hesitate to use for such purposes as it saw fit, any moneys on which it could lay its hands. It has

Special attention is directed to Exhibit IIIc to XXXI, inclusive, of Price, Waterhouse & Co.'s report entitled "Second Report on Investigation of Financial Condition", dated January 8th, 1933. These exhibits show expenditures, such as salaries, expenditures, the amount paid or unpaid, and funds borrowed from outside sources for each of the years 1932 to 1929, inclusive. In those Exhibits, the general practice of the Commission in which funds appropriated by the Legislature for specific purposes on some other than in payment on which that year appropriated is already made.

Summary

The practice of the Commission in expending the Legislature's appropriations, directing their specifically voted for one purpose but applying them for another purpose, and using them specifically intended for other for the purpose in totally unauthorized ways, shows a total disregard of its duties and obligations. It has been stated many times that our commission practiced this practice. Now did not justify it, but, as we have already pointed out in another report, directions, it was necessary, and made to a greater extent after the war than during its progress.

The Commission and especially the Chairman of the Commission has authoritatively shown an ignorance of fiduciary relationship and a disregard of fiduciary obligations. If the Government did not give the Commission the money, when it wanted it, the Commission did not consider it was for the purpose on it was it, any money on which it could lay its hands. It has

thus disregarded the conditions imposed by the Legislature when it voted the money. It is not easy to understand how it was that the Commission was permitted for such a long period to handle the funds that came into its hands with such incredible looseness.

In effect, the Legislature has encouraged the Commission in such practices for it has voted year after year funds sufficient to cover over-expenditures made by the Commission, without asking it to account for its unwarranted actions.

- End of Volume I -